

Figure 1

BER for Rate 1/2 16QAM, N=512 and N=32768 bits, AWGN Channel

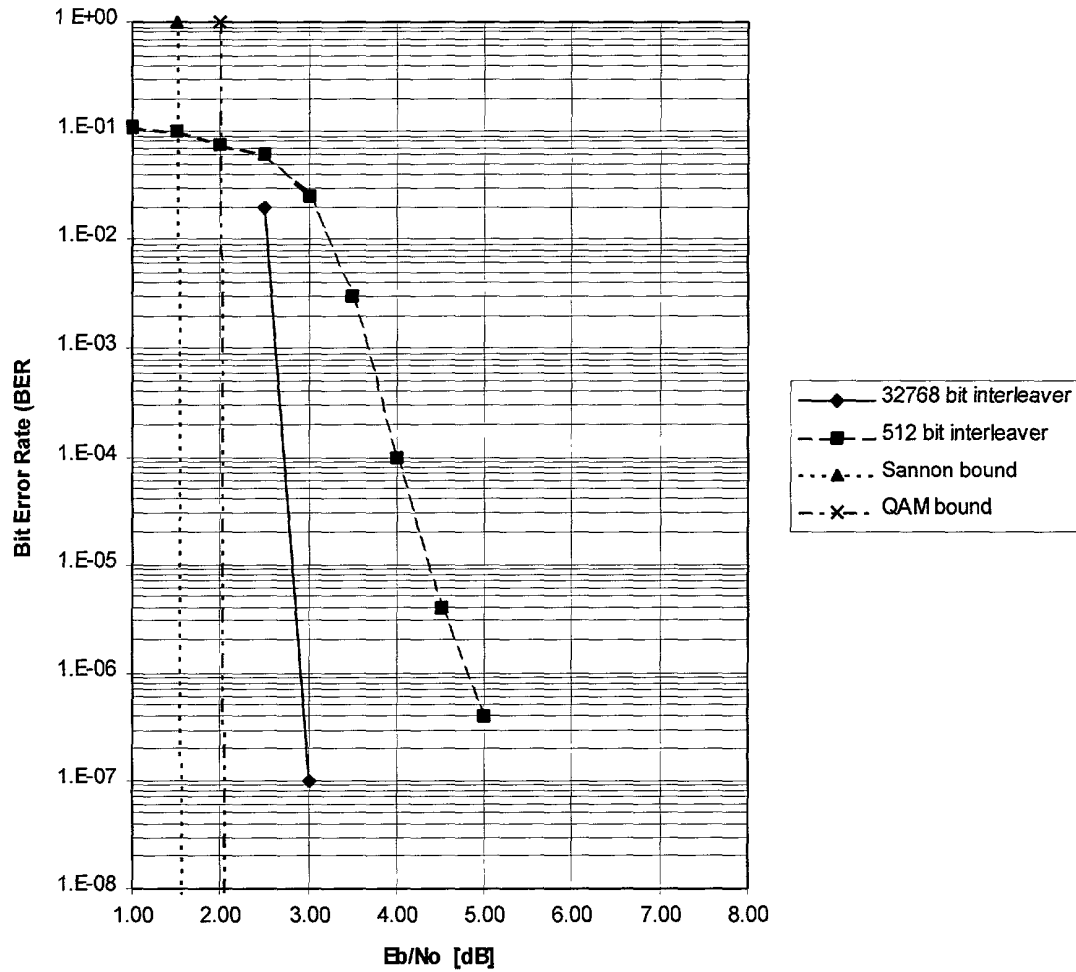


Figure 2

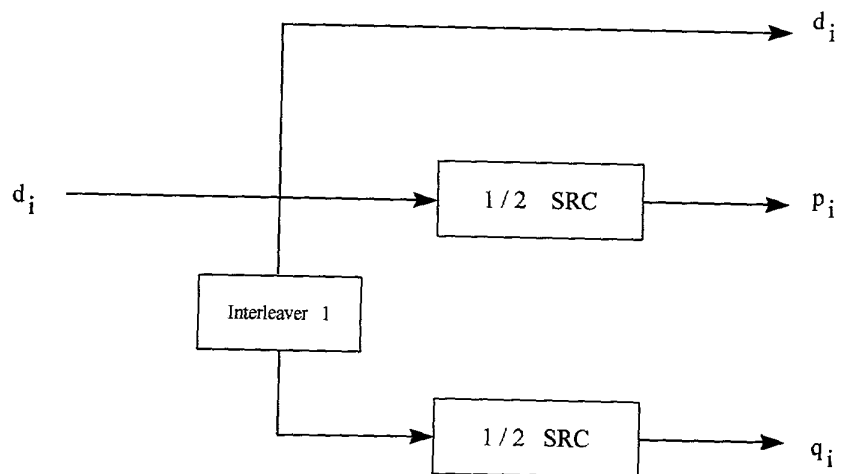


Figure 3

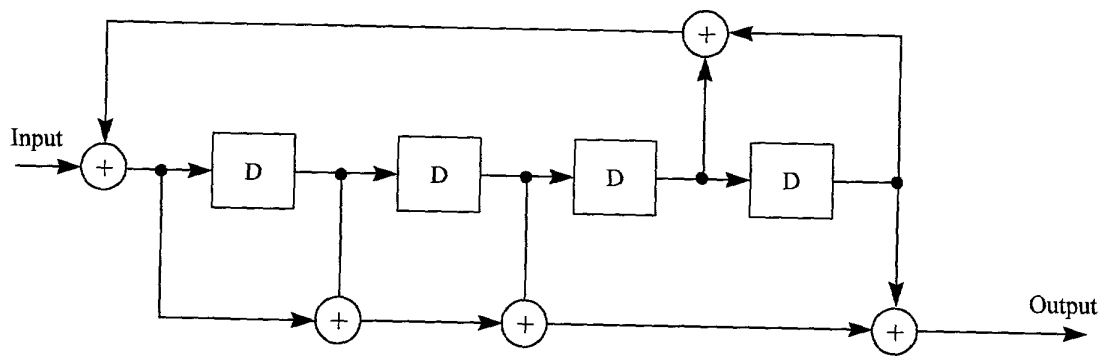


Figure 4

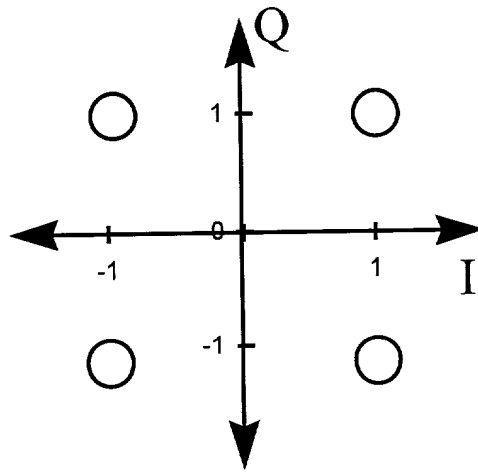


Figure 5

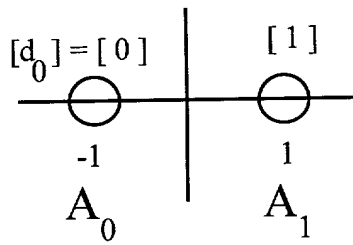


Figure 6

BER for Rate 2/6 4QAM N=1,024 bits AWGN Channel

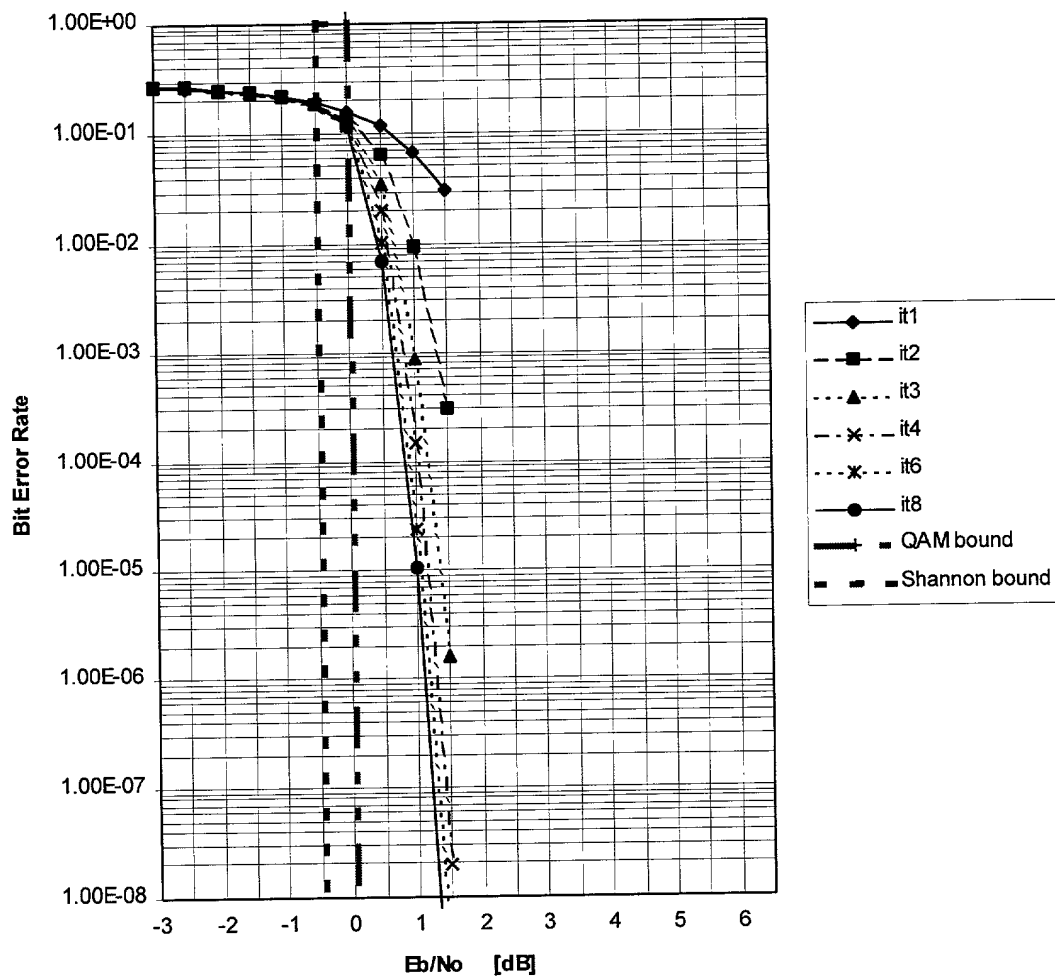


Figure 7

BER for Rate 2/4 4QAM N=1,024 bits AWGN Channel

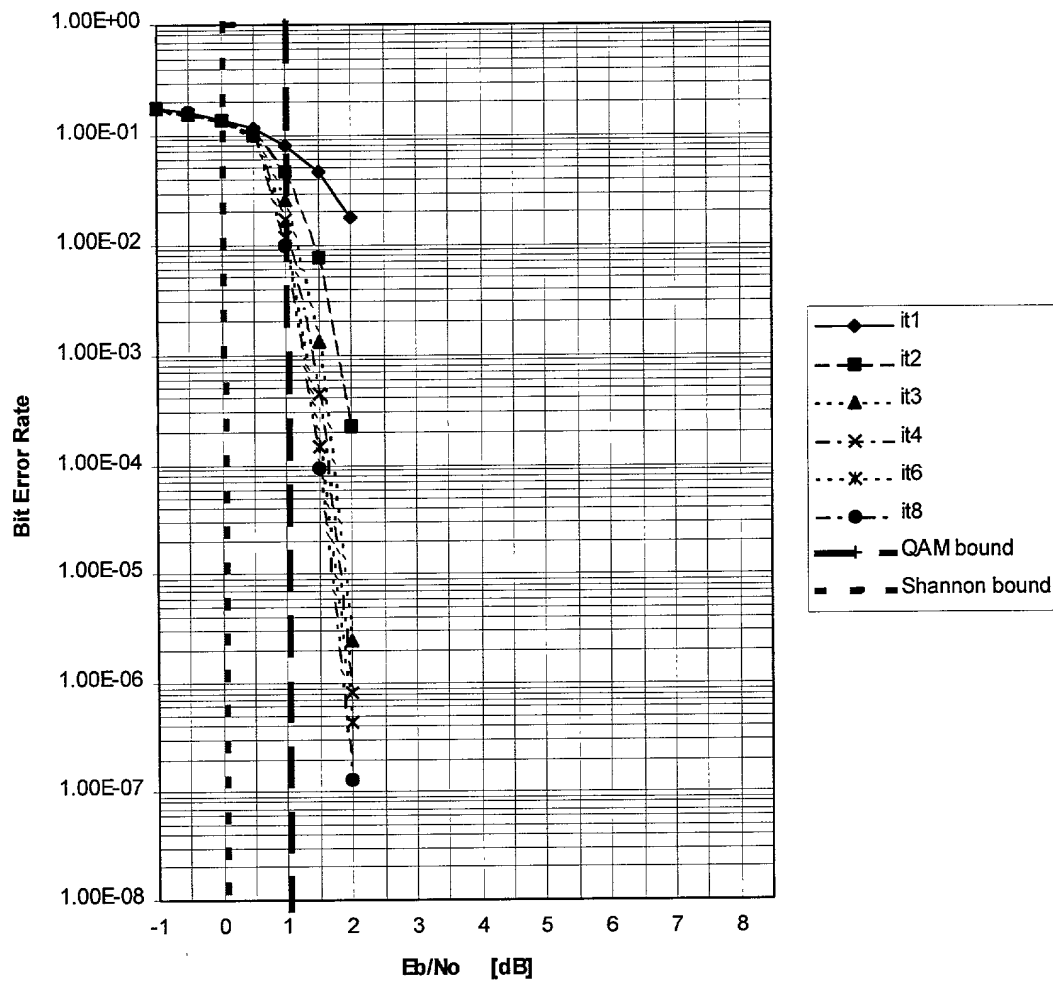


Figure 8

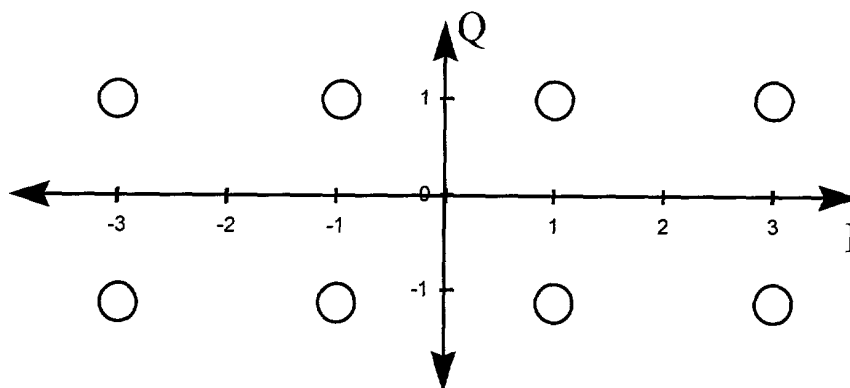


Figure 9

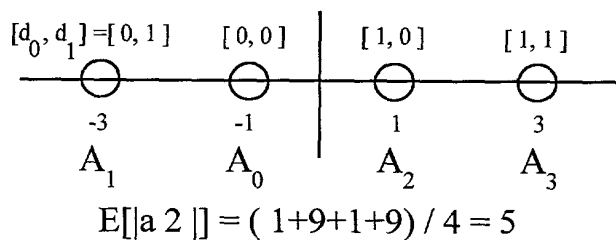


Figure 10

BER for Rate 1/3 8QAM N=1,024 bits AWGN Channel

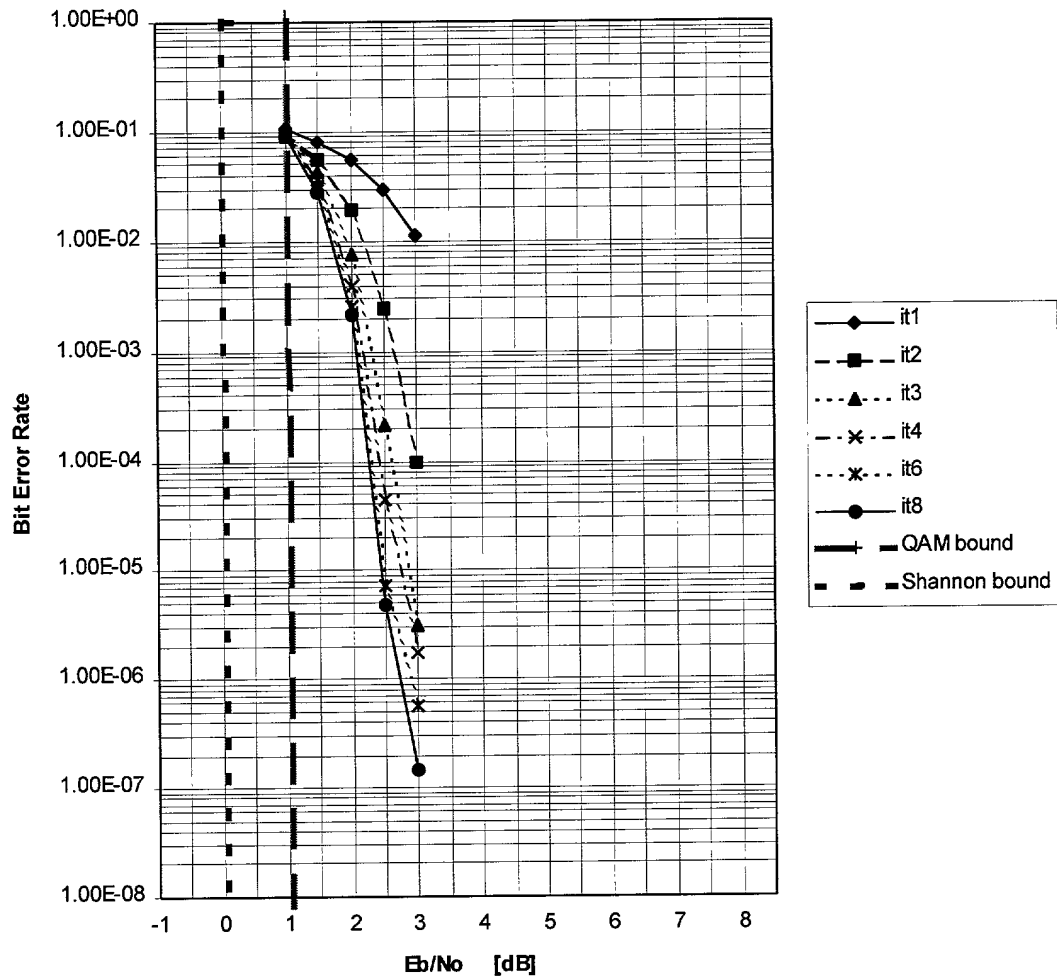


Figure 11



BER for Rate 4/6 8QAM N=1,024 bits AWGN Channel

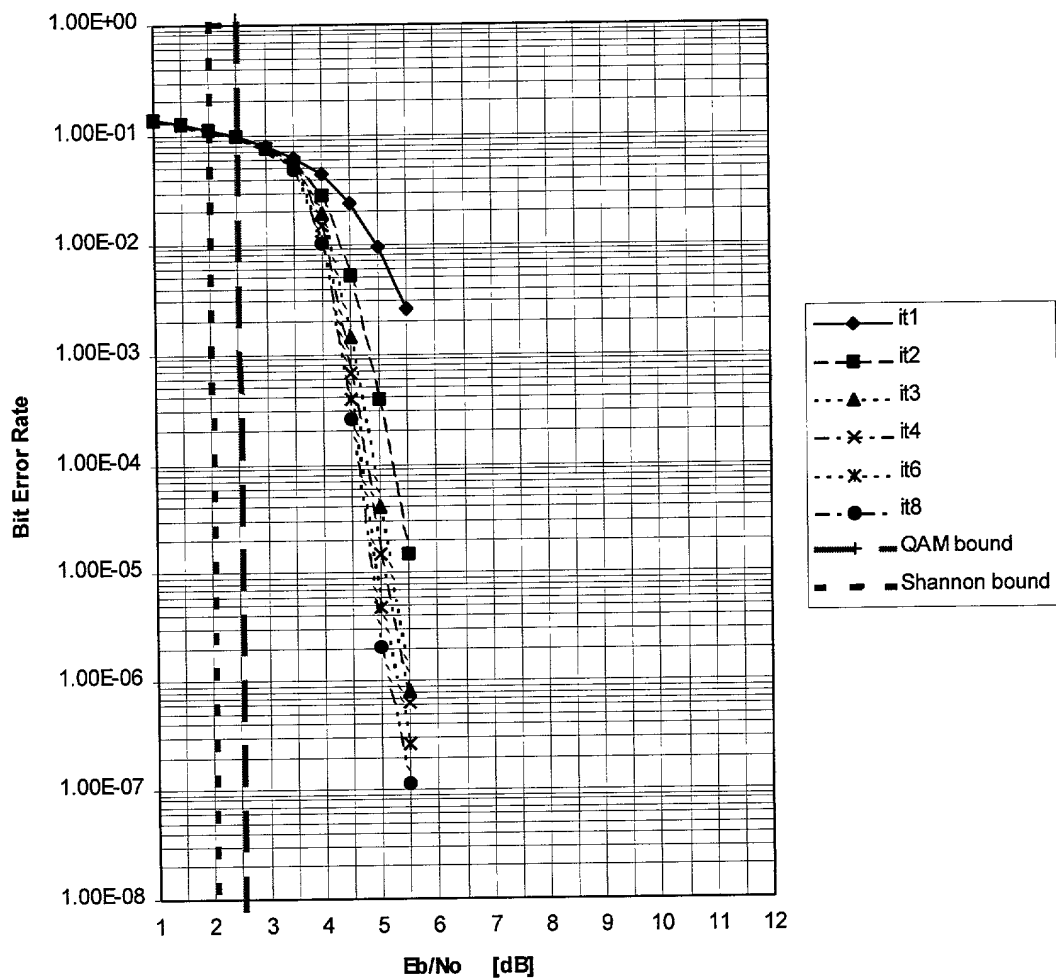


Figure 12

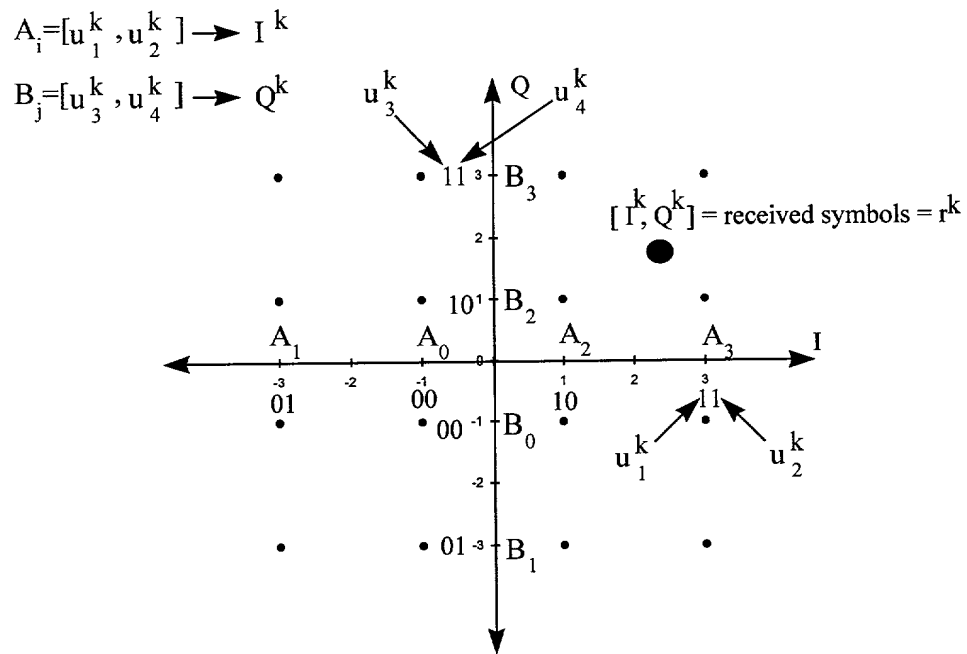


Figure 13

BER for Rate 1/2 16QAM, N=272 bits (odd-even), AWGN Channel

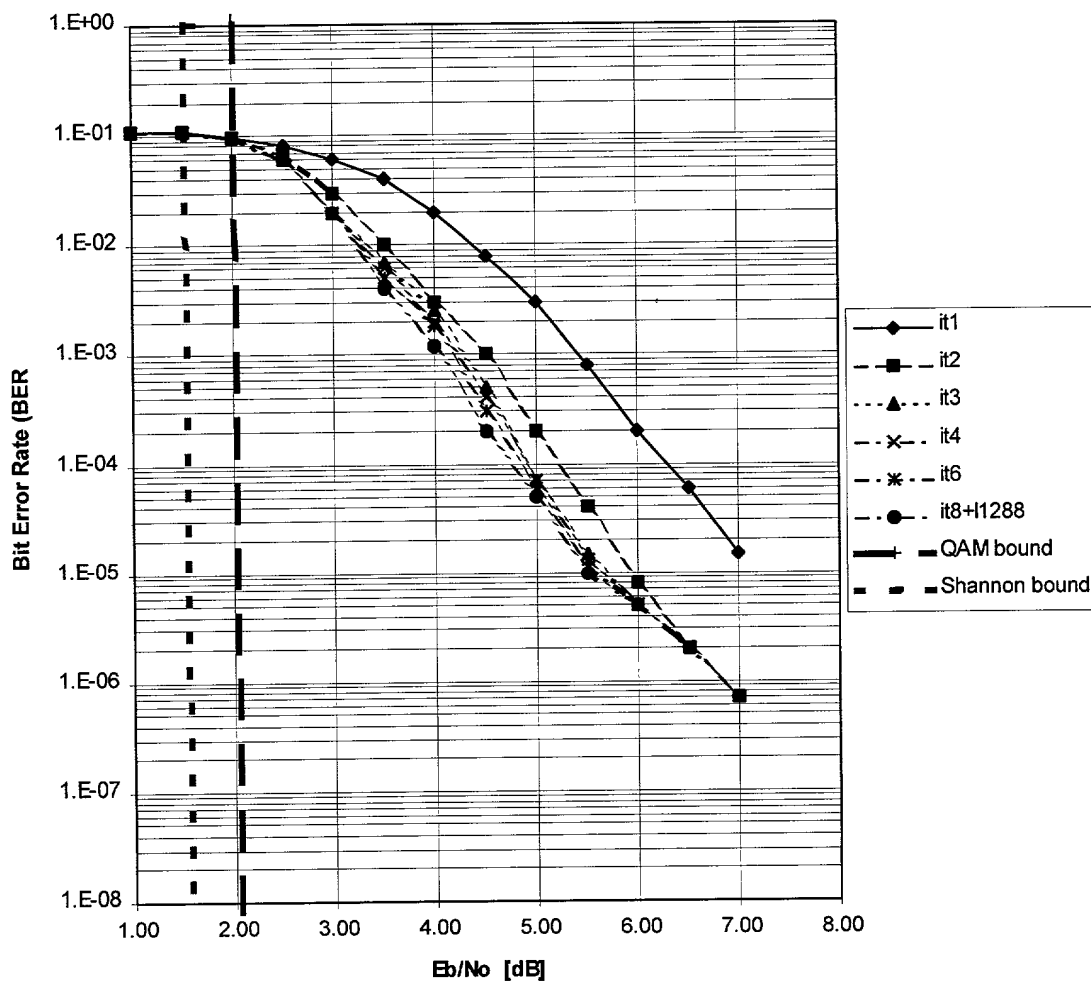


Figure 14

BER for Rate 1/2 16QAM, N=256 bits S-type, AWGN Channel

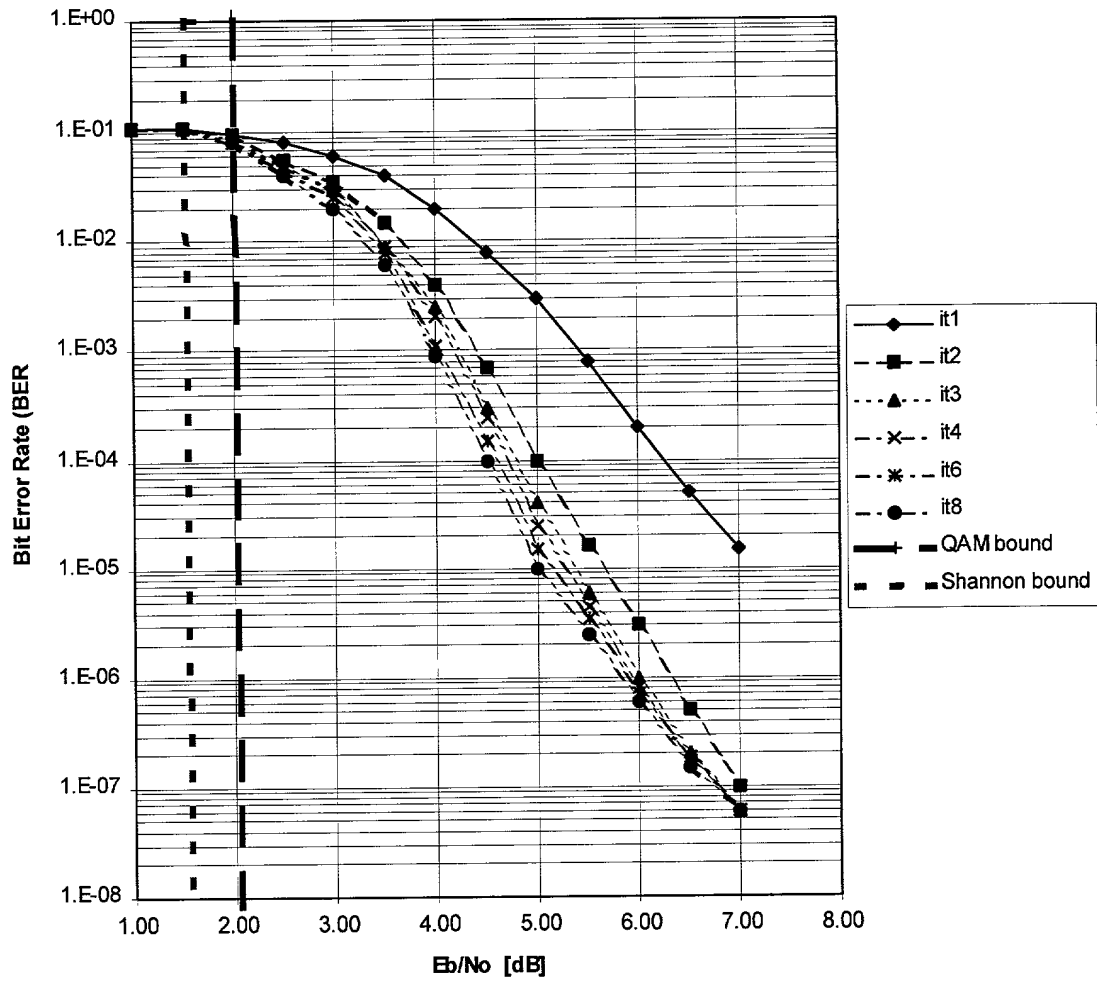


Figure 15

BER for Rate 1/2 16QAM, N=512 bits S-type, AWGN Channel

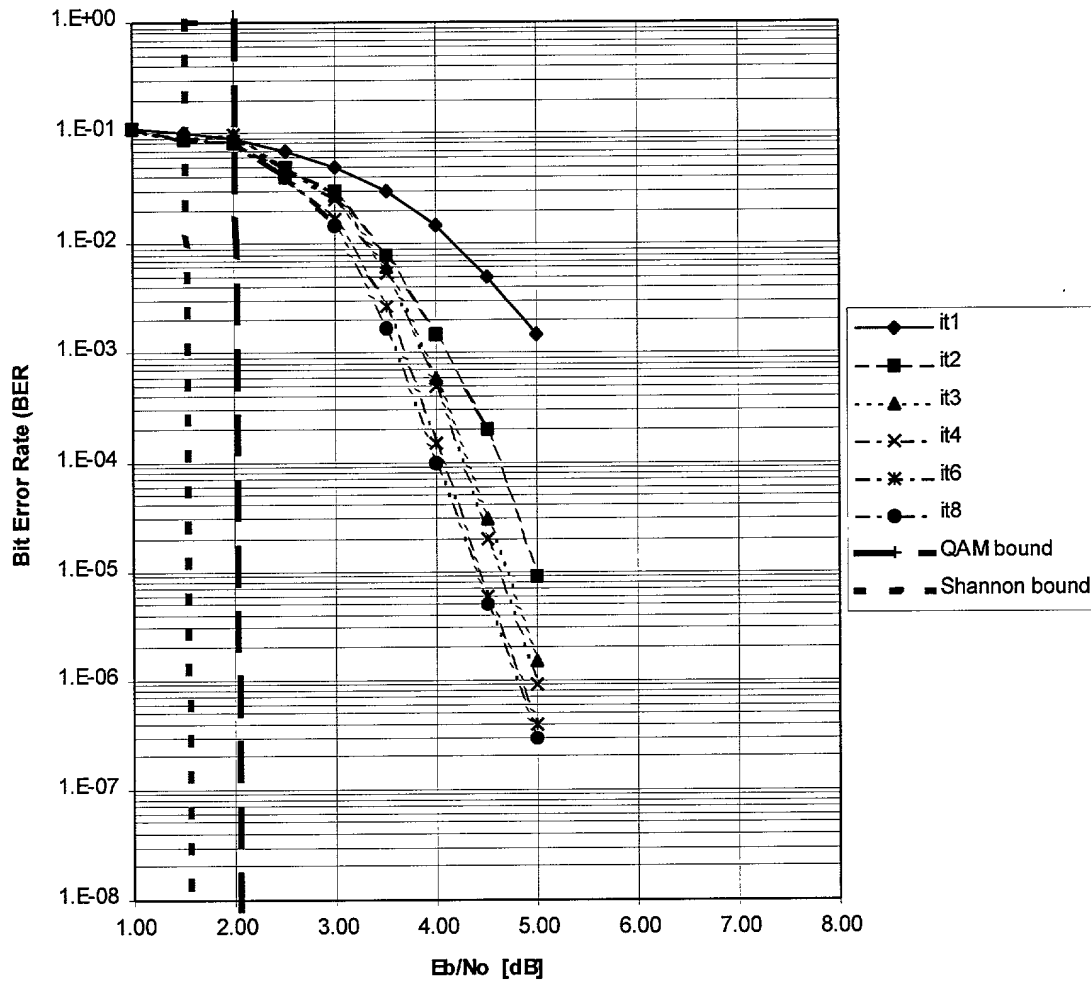


Figure 16

BER for Rate 1/2 16QAM, N=768 bits S-type, AWGN Channel

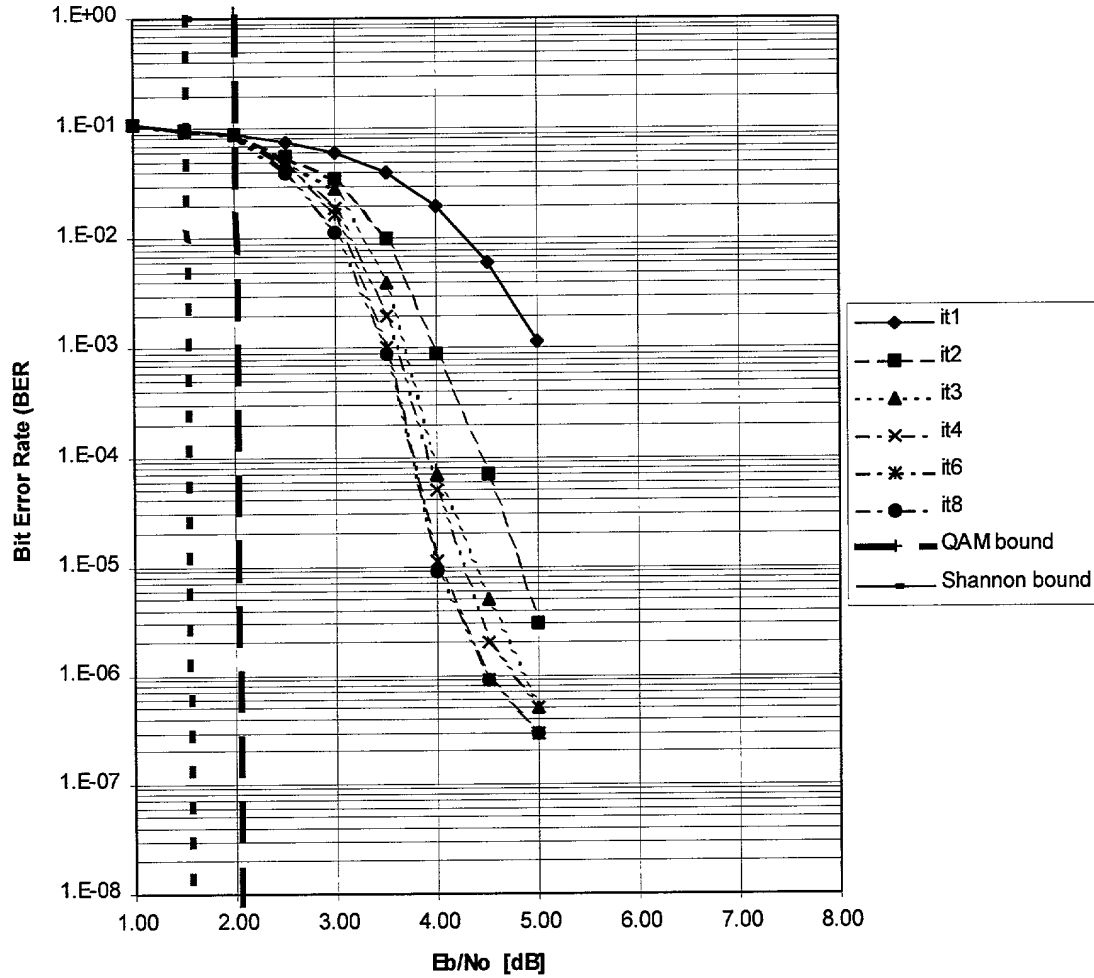


Figure 17

BER for Rate 1/2 16QAM, N=1024 bits S-type, AWGN Channel

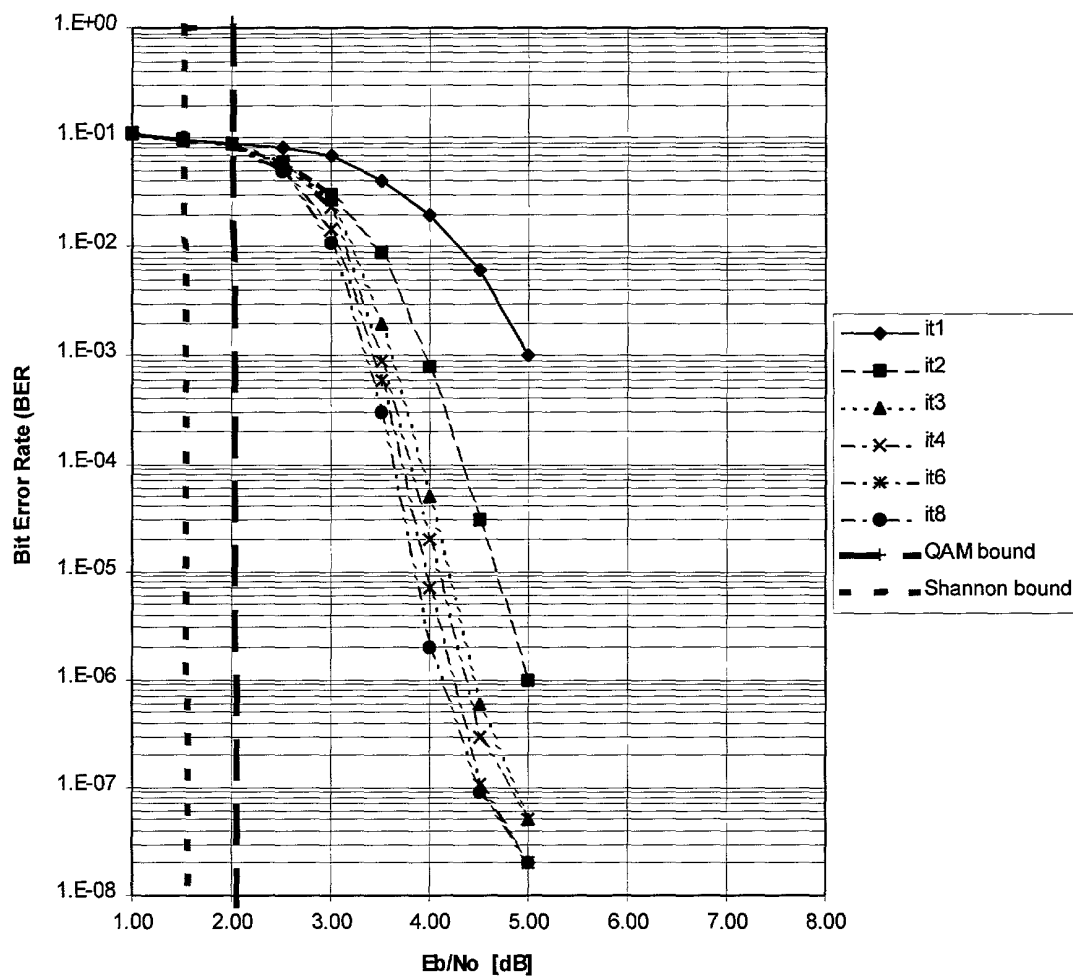


Figure 18

BER for Rate 3/4 16QAM, N=6,144 bits S-type, AWGN Channel

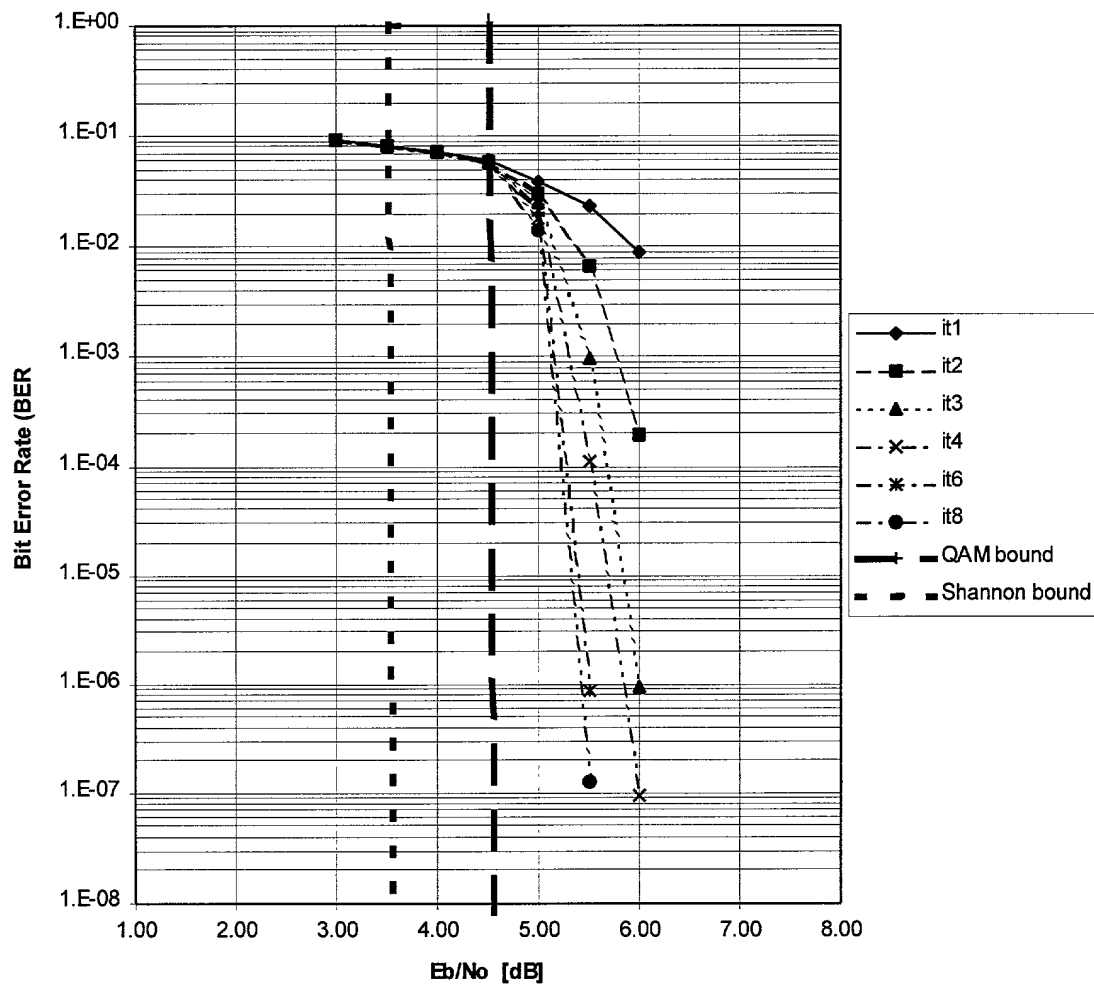


Figure 19



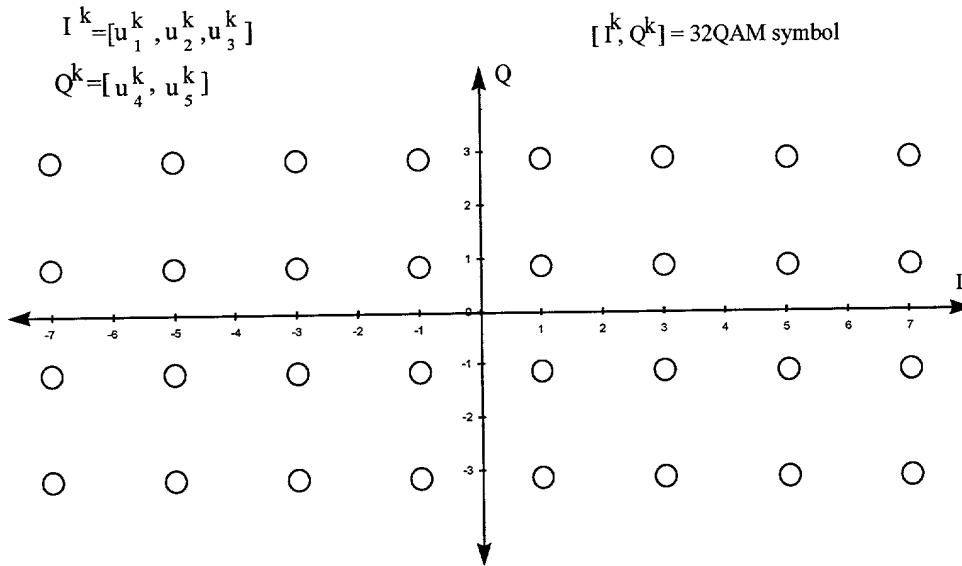
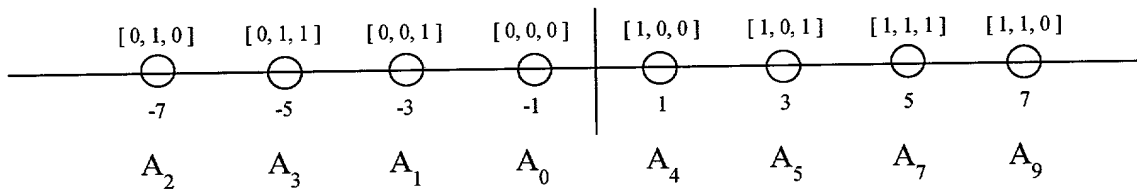


Figure 20



$$E[|a|^2] = (1+9+25+49) / 4 = 21$$

Figure 21

BER for Rate 3/5 32QAM, N=6,144 bits S-type, AWGN Channel

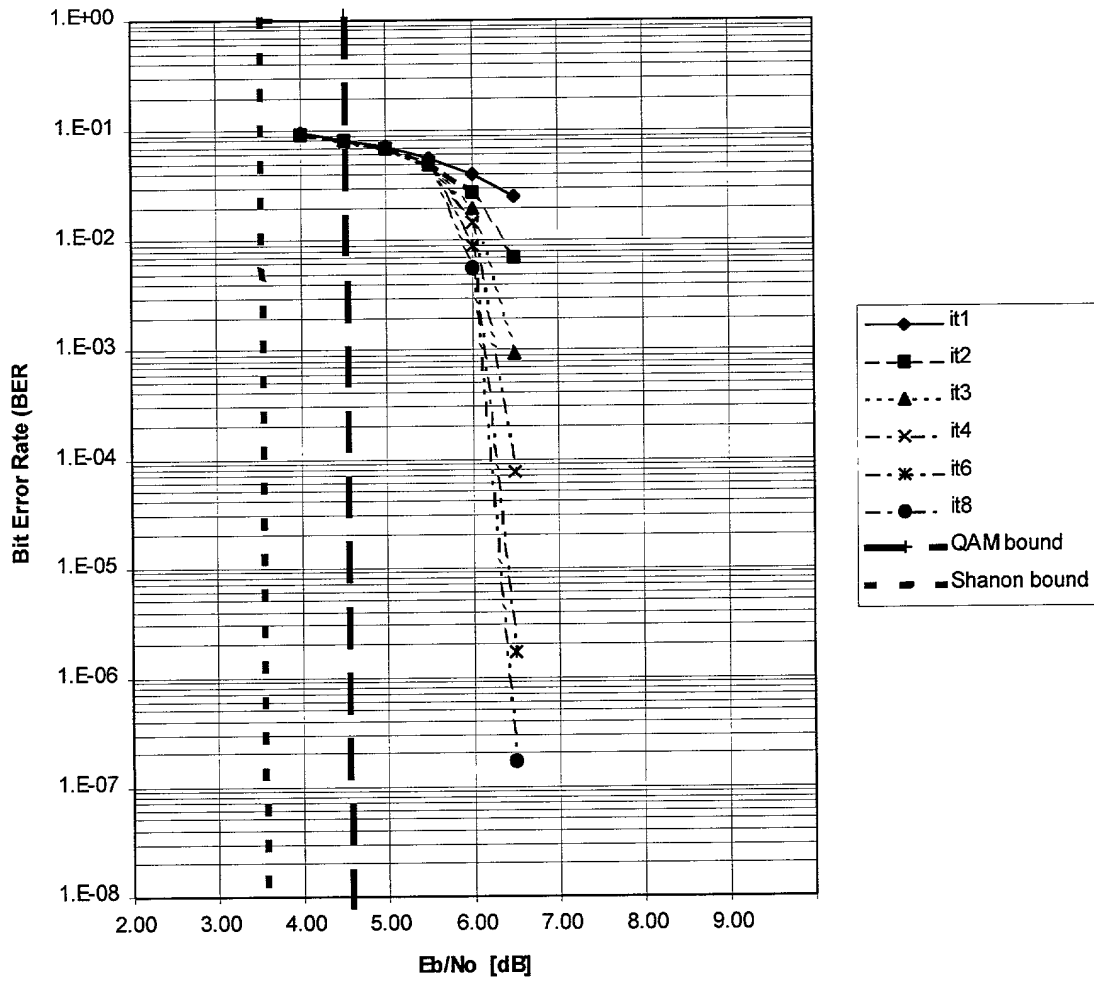


Figure 22

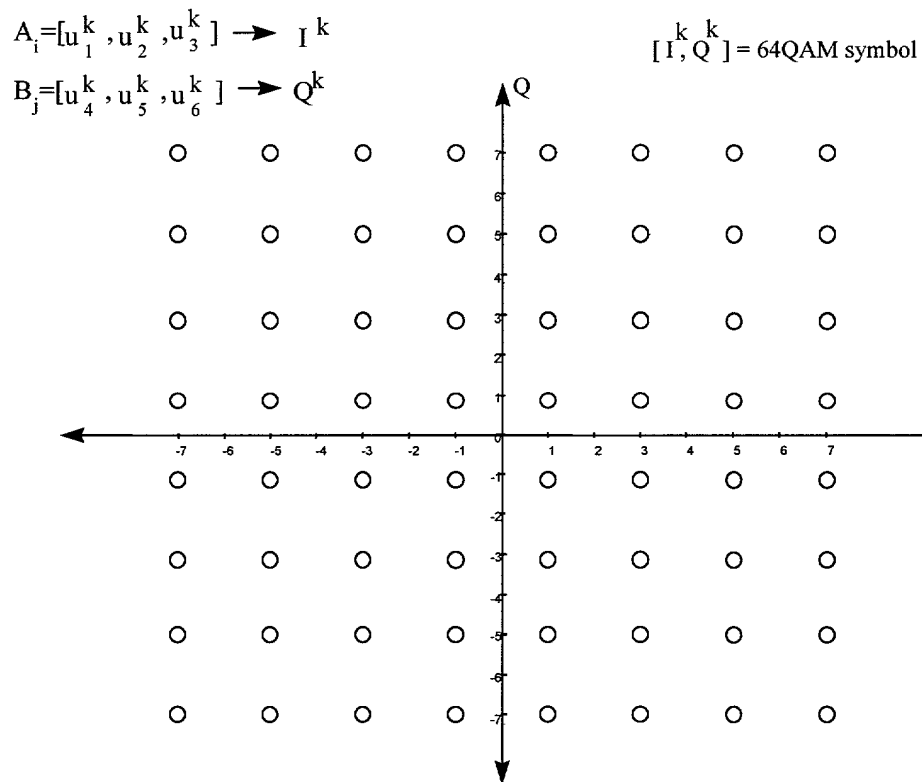


Figure 23

BER for Rate 3/6 64QAM, N=6,144 bits S-type, AWGN Channel

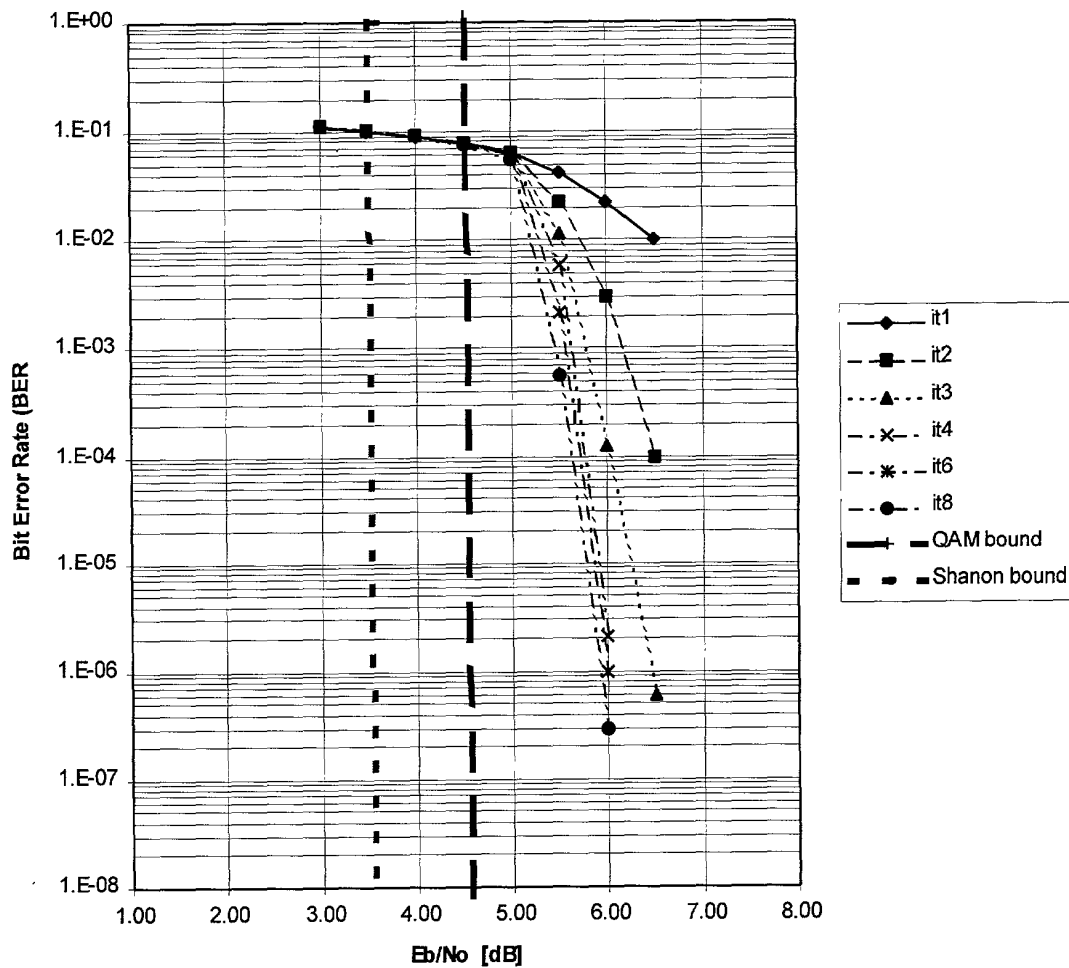


Figure 24

BER for Rate 4/6 64QAM N=4,096 bits AWGN Channel , Gray Mapping

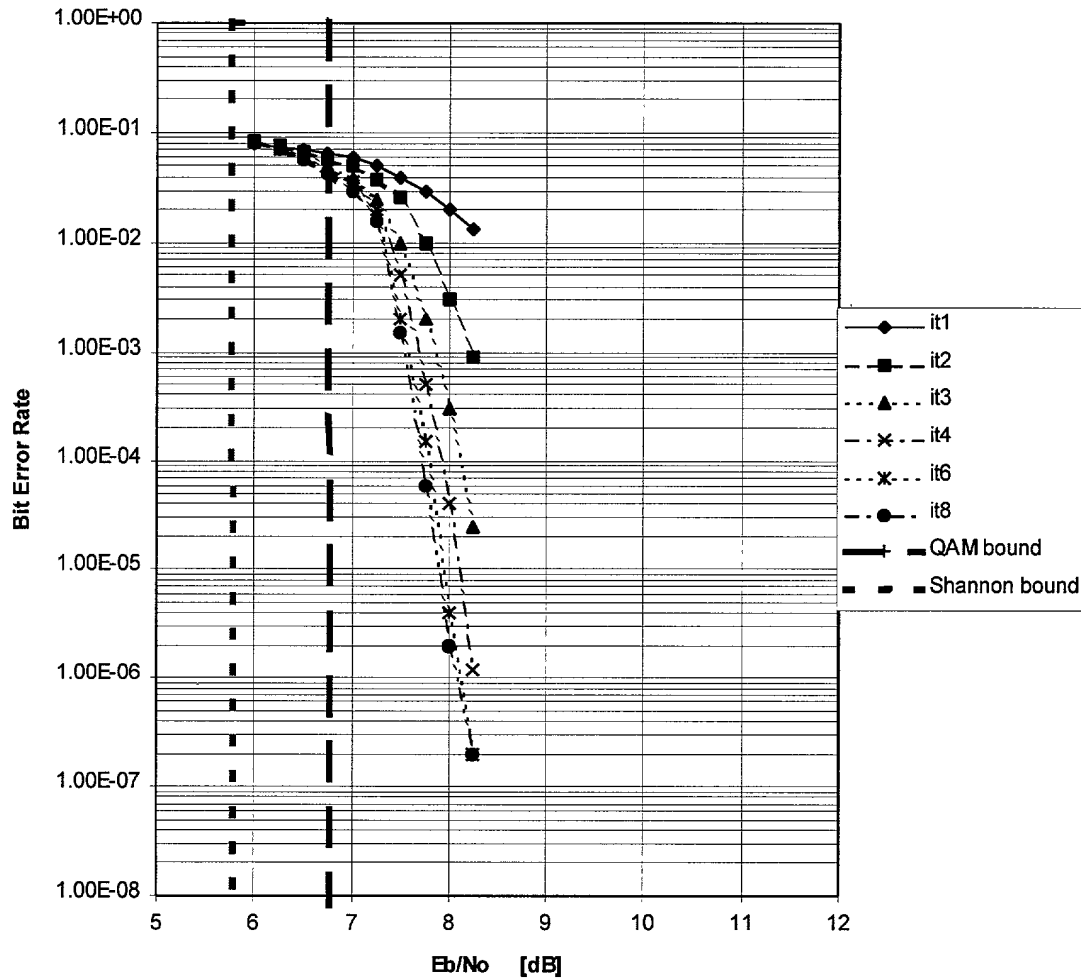


Figure 25

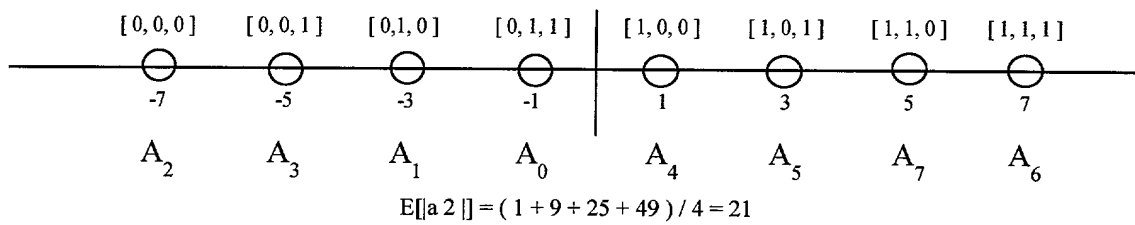
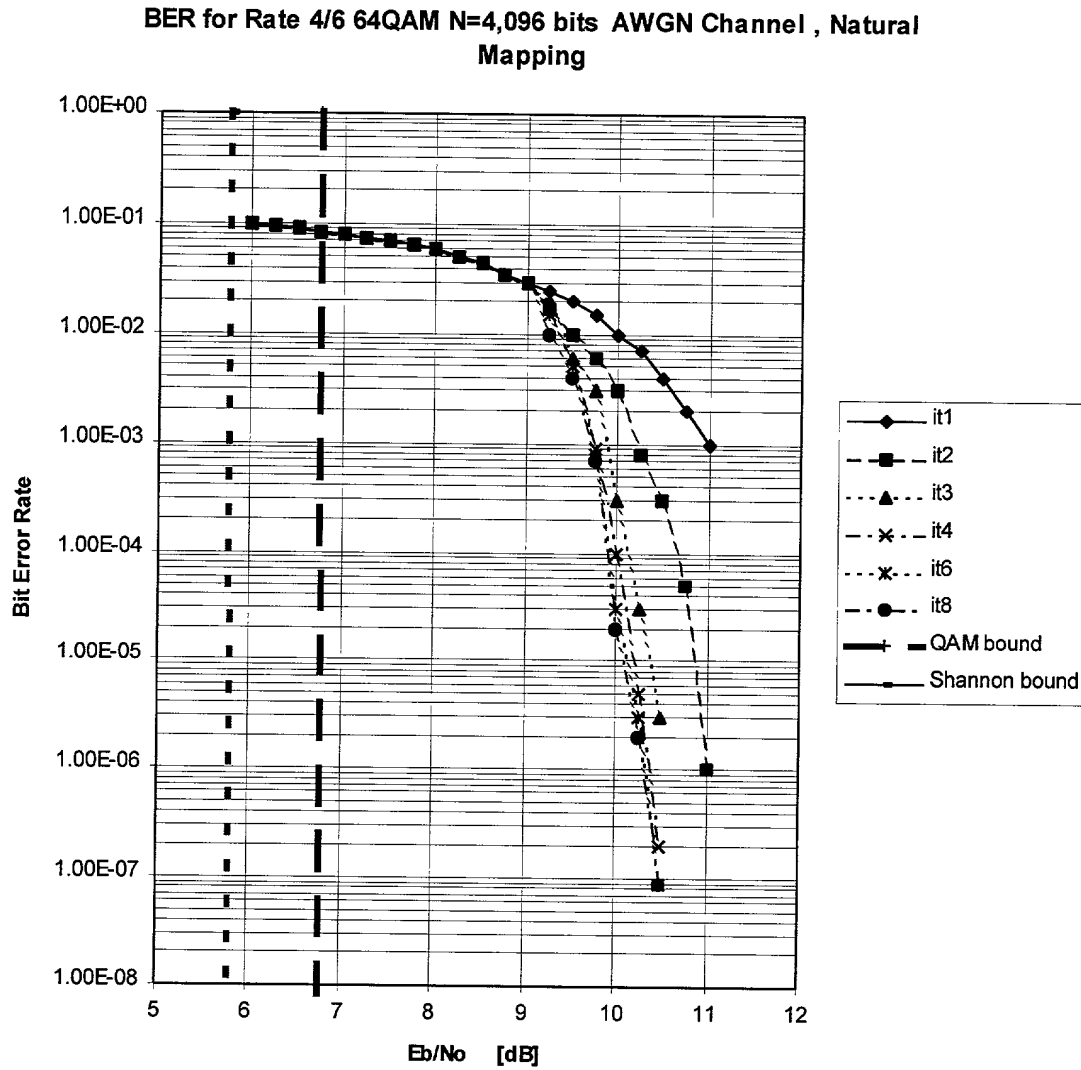


Figure 26



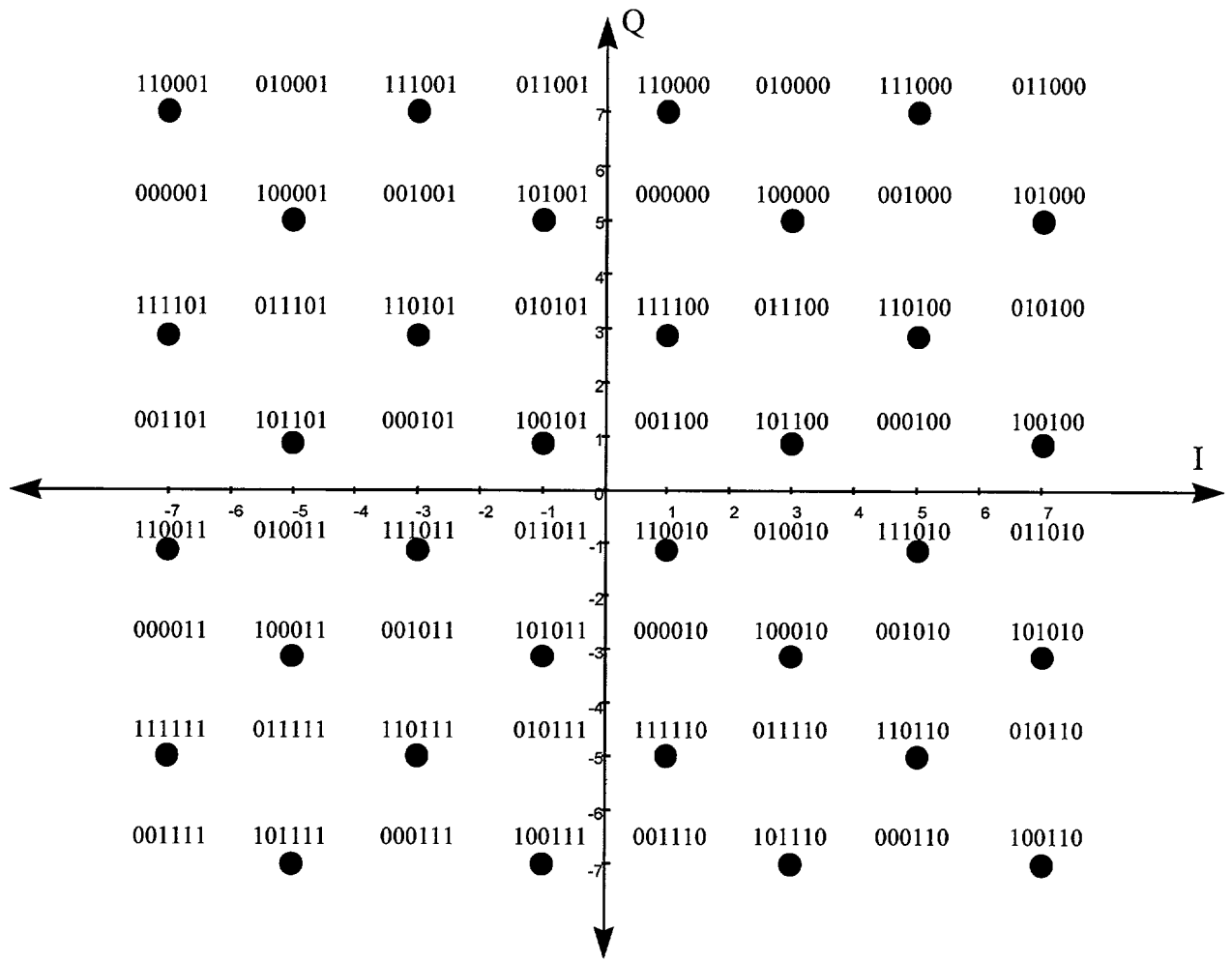


Figure 28



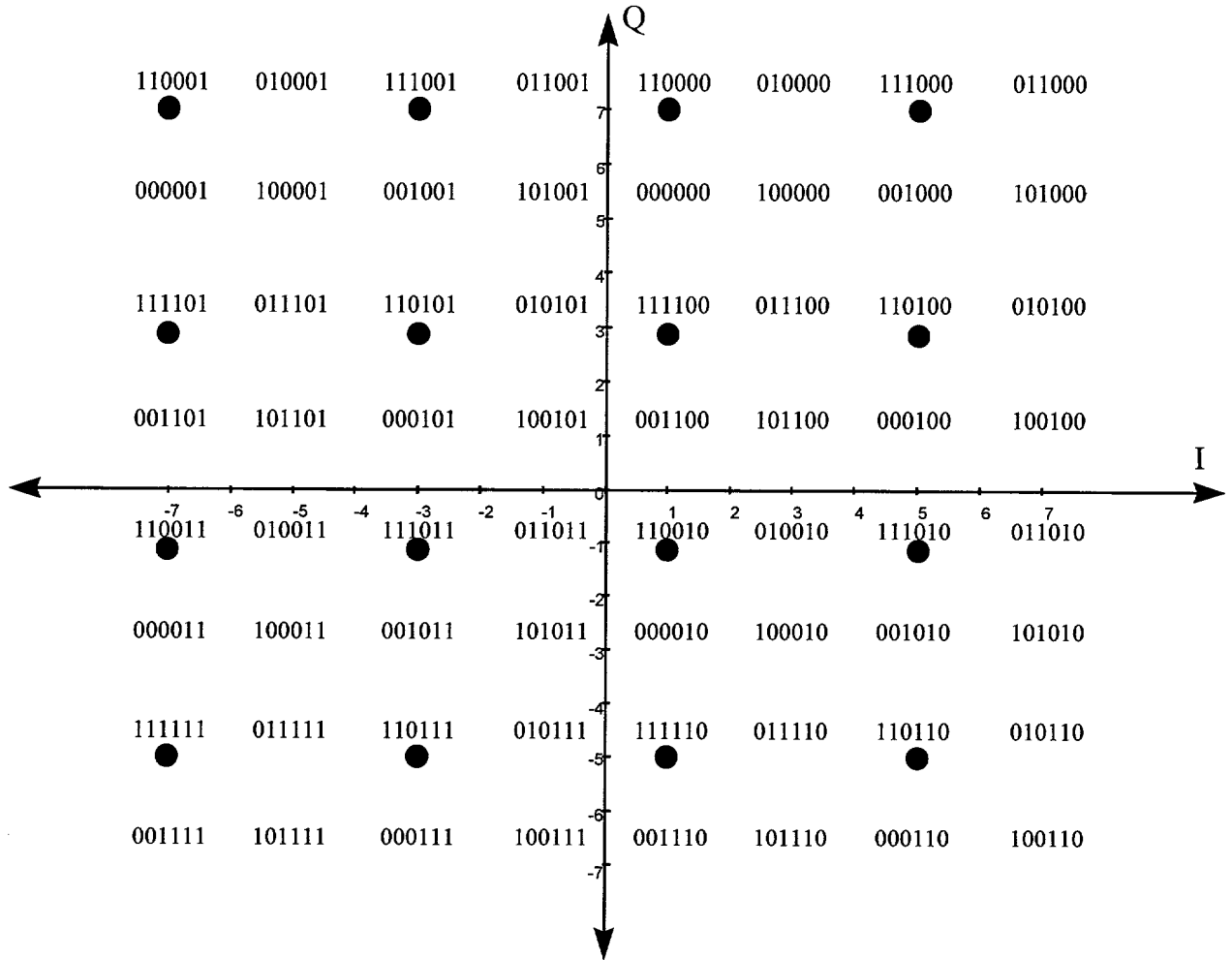


Figure 29

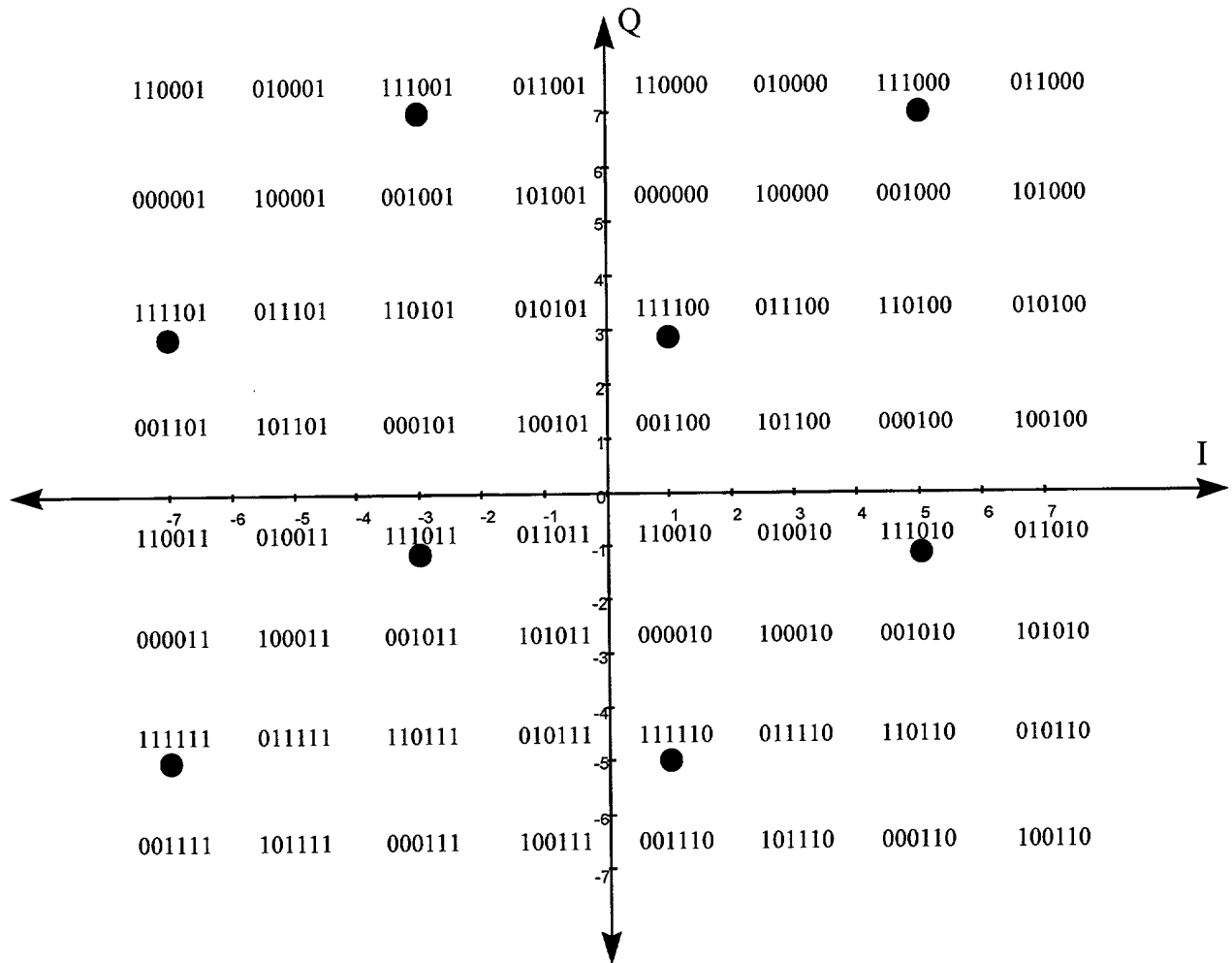


Figure 30

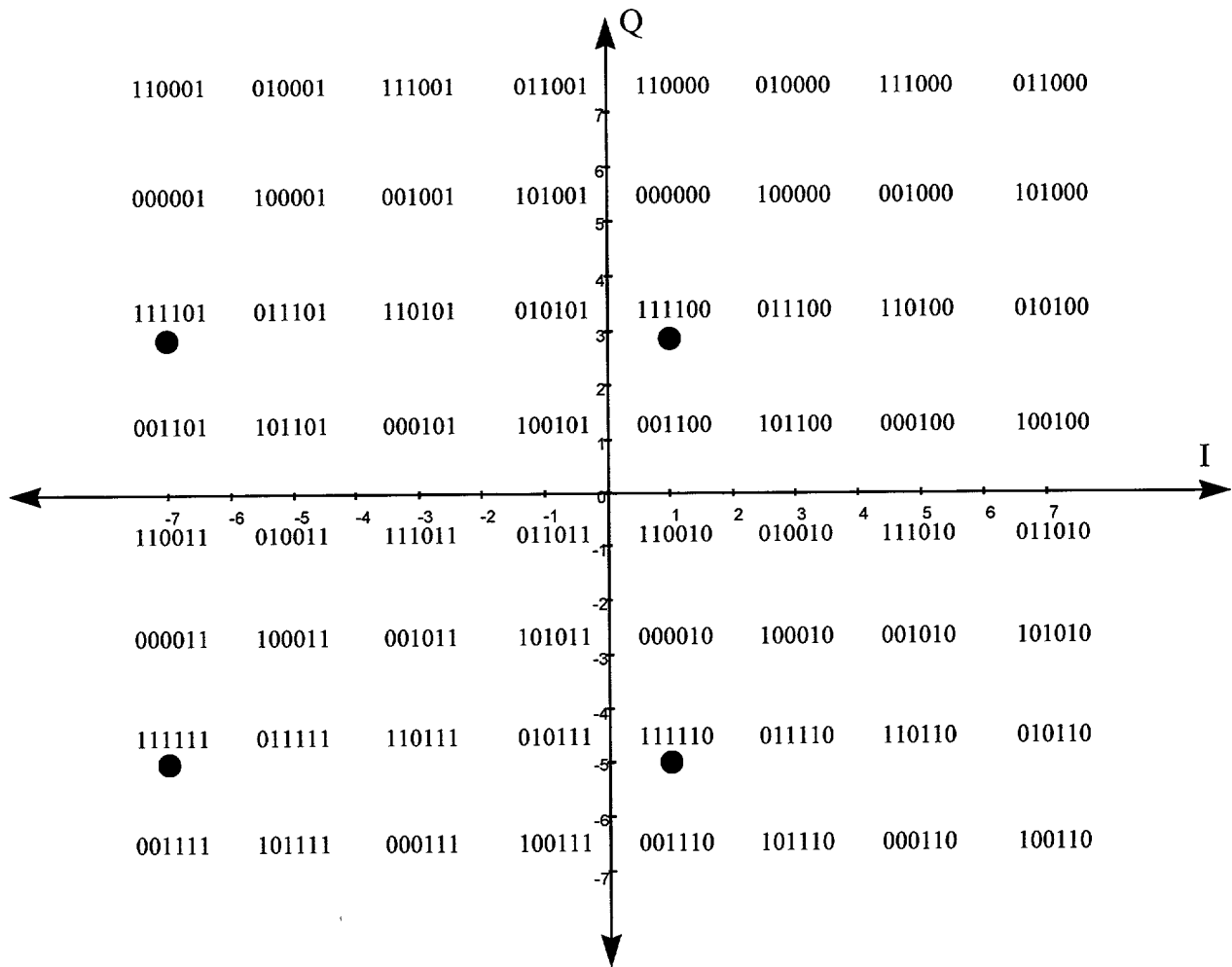


Figure 31

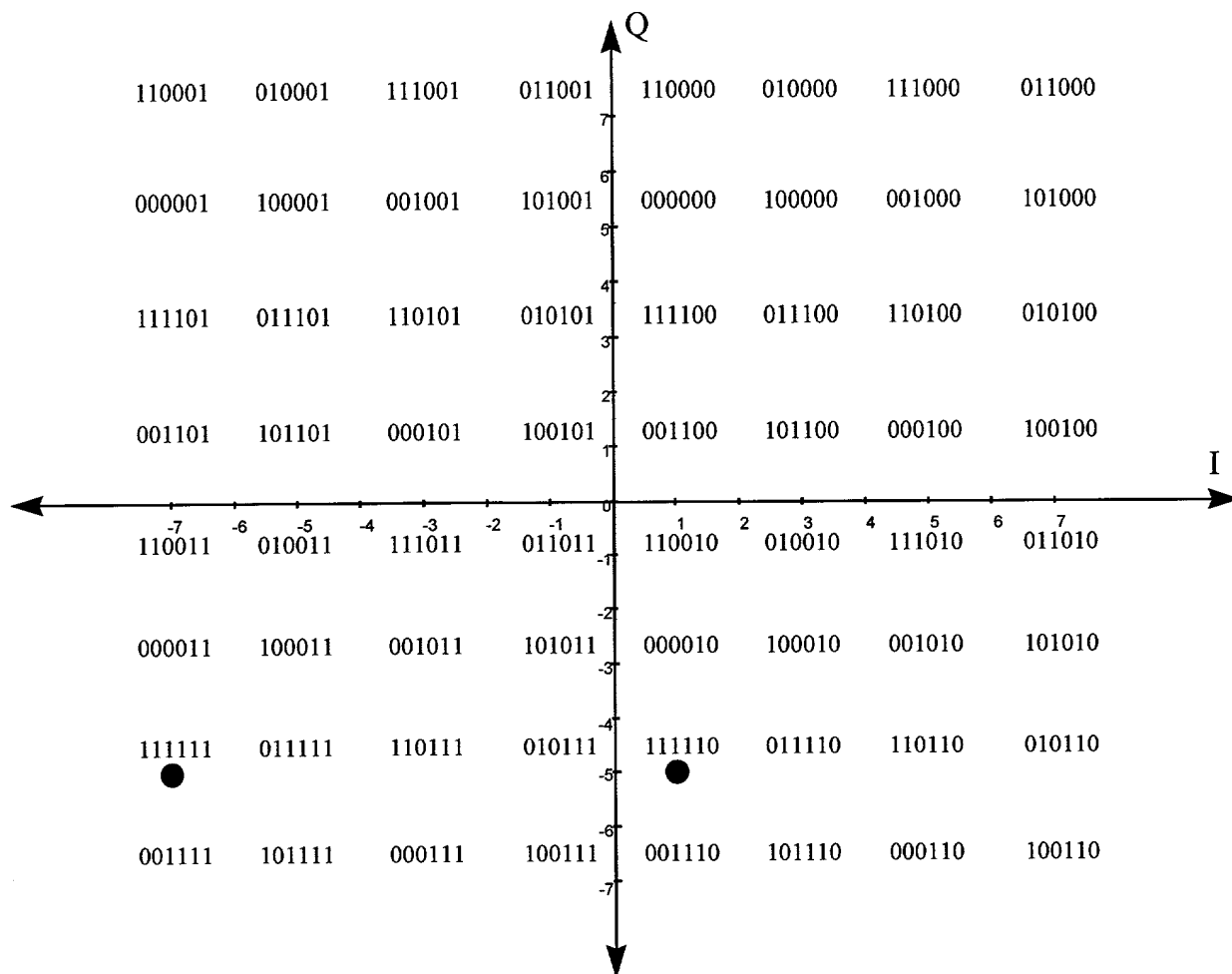


Figure 32

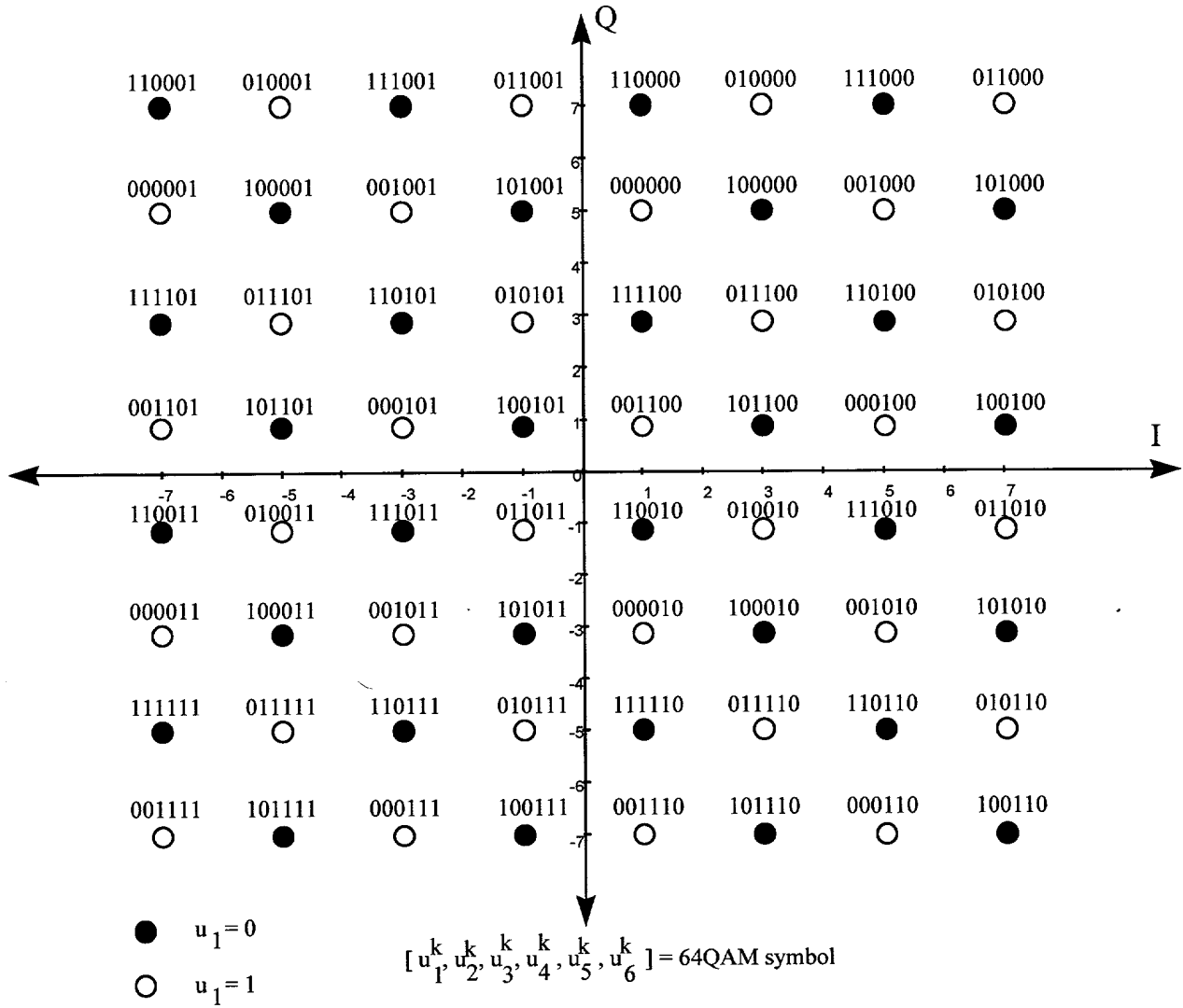


Figure 33

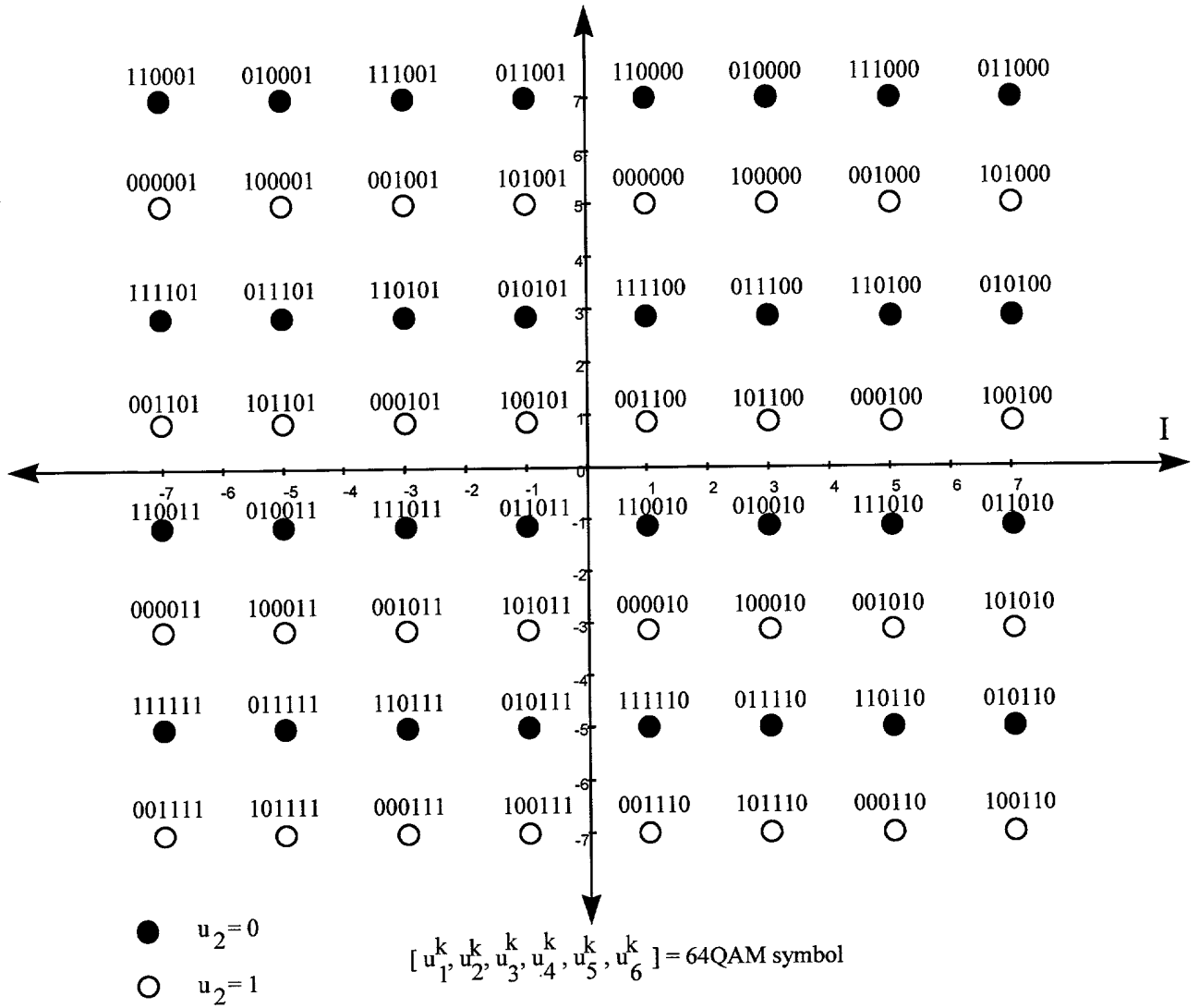


Figure 34

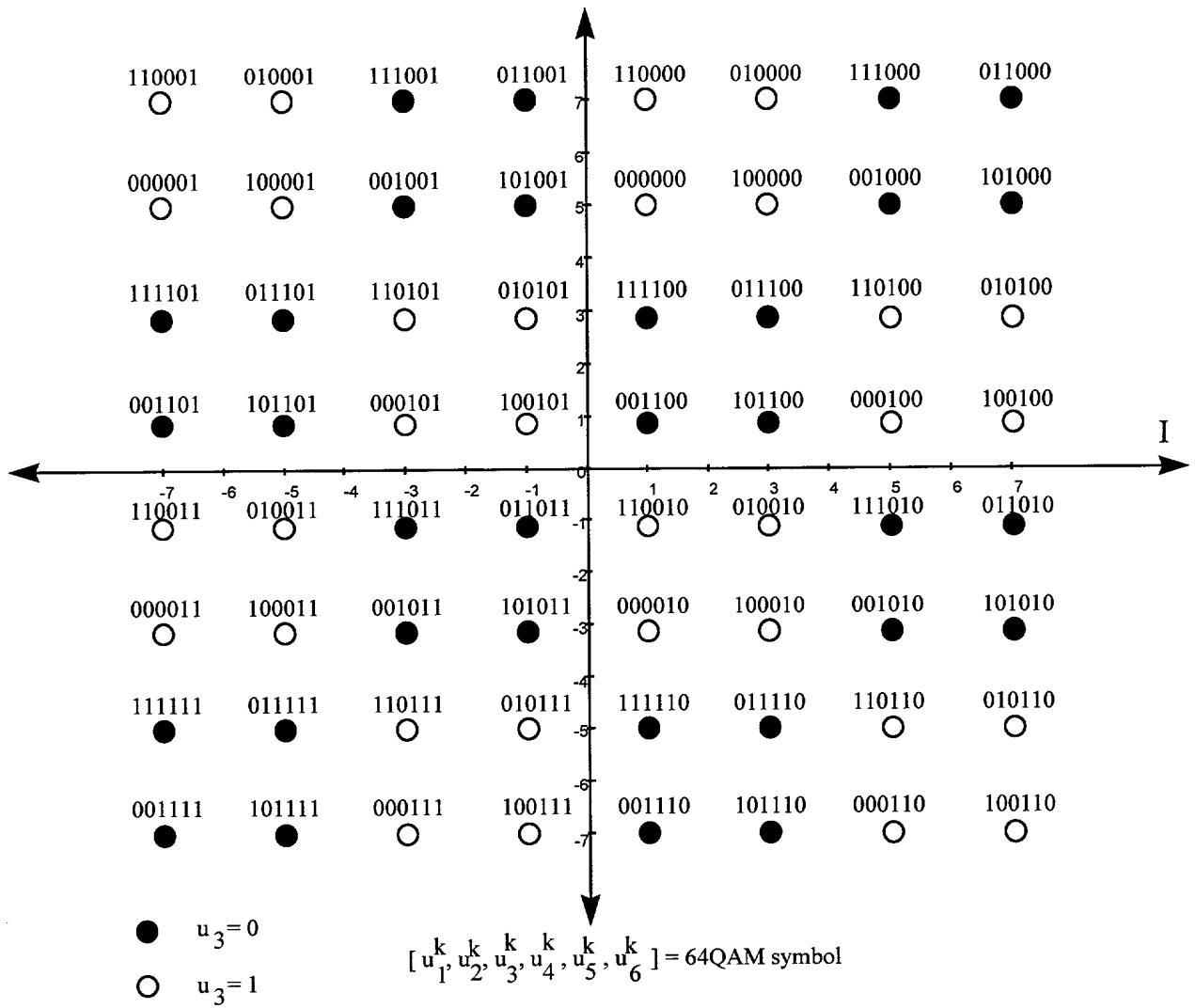


Figure 35

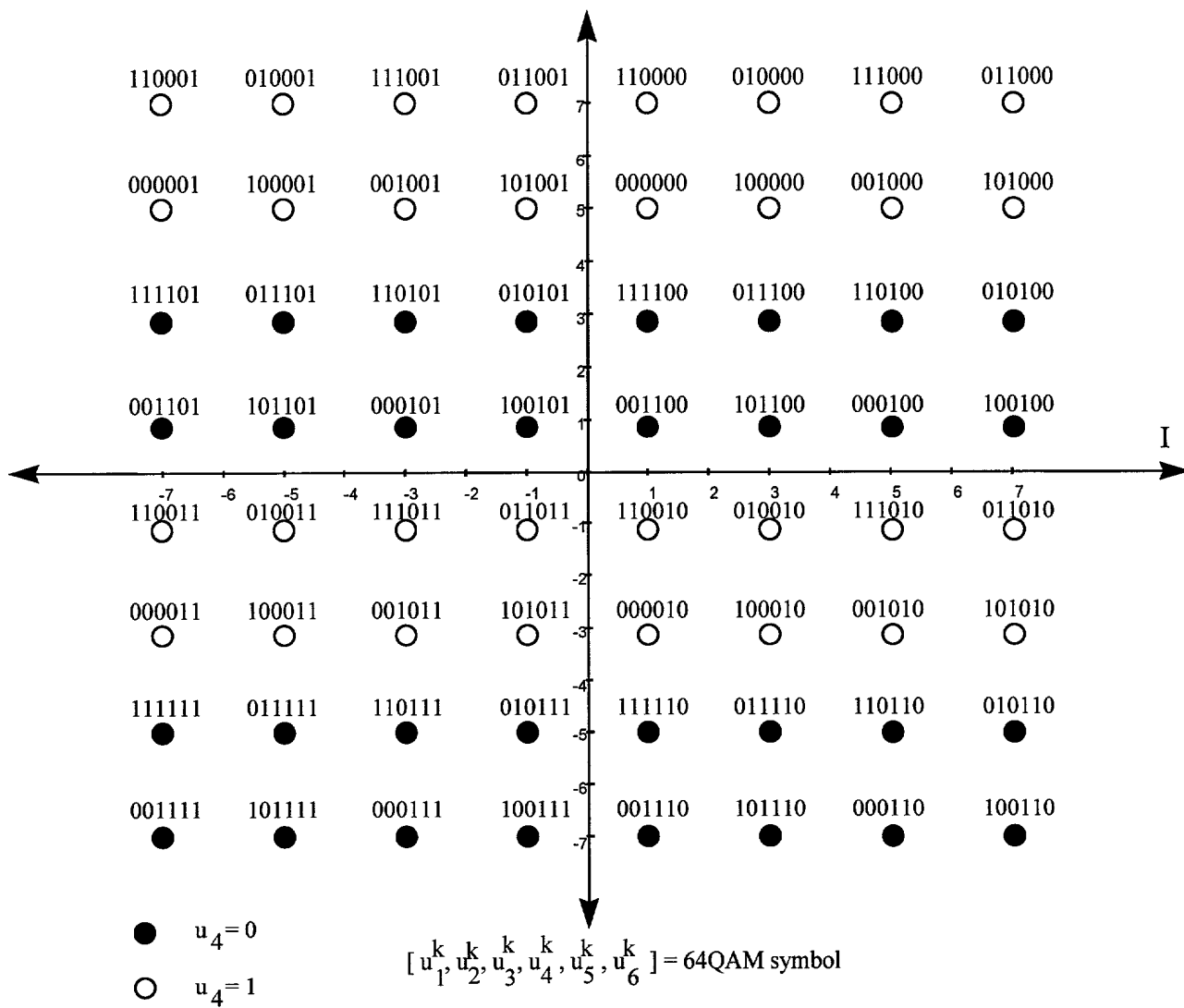


Figure 36



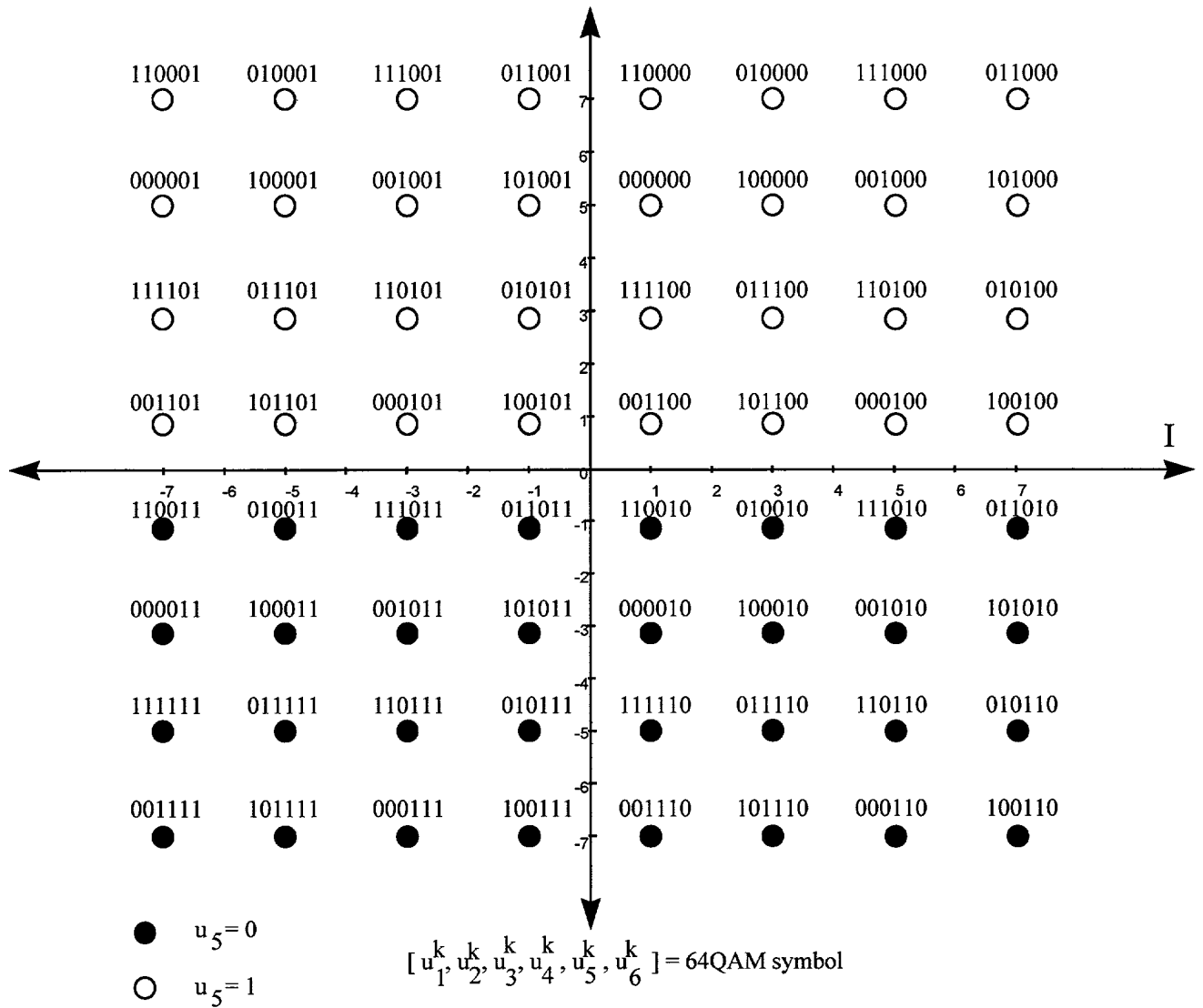


Figure 37

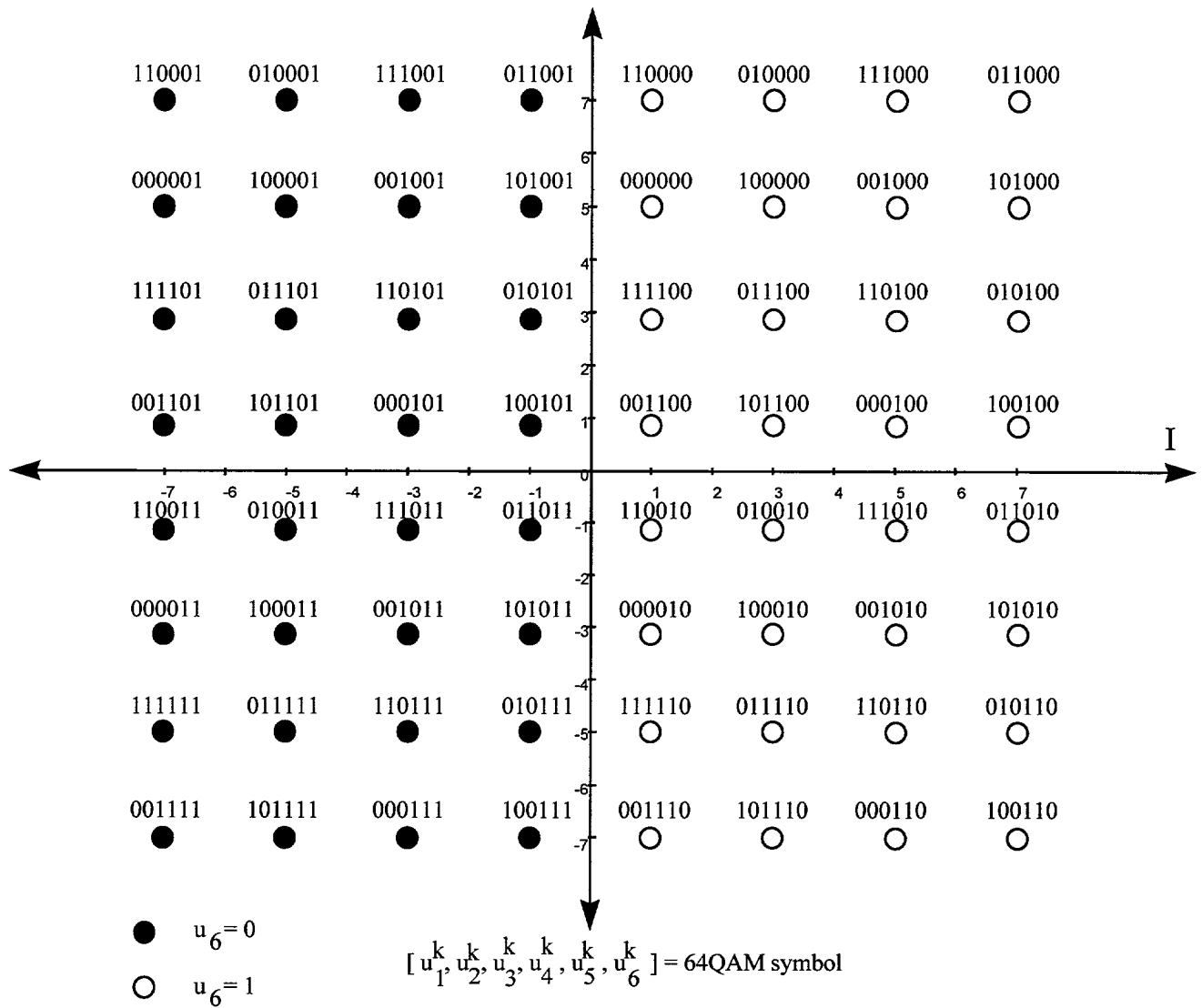


Figure 38

BER for Rate 4/6 64QAM N=4,096 bits AWGN Channel

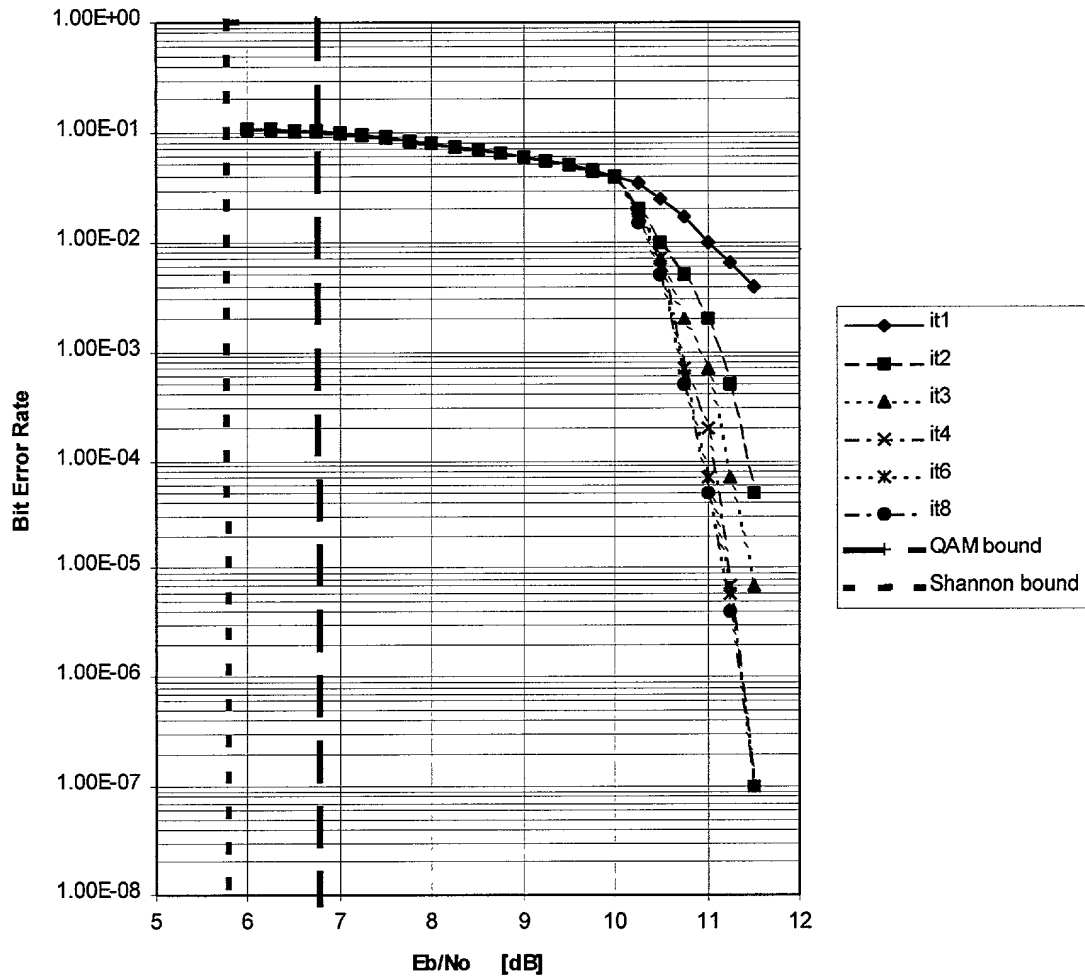
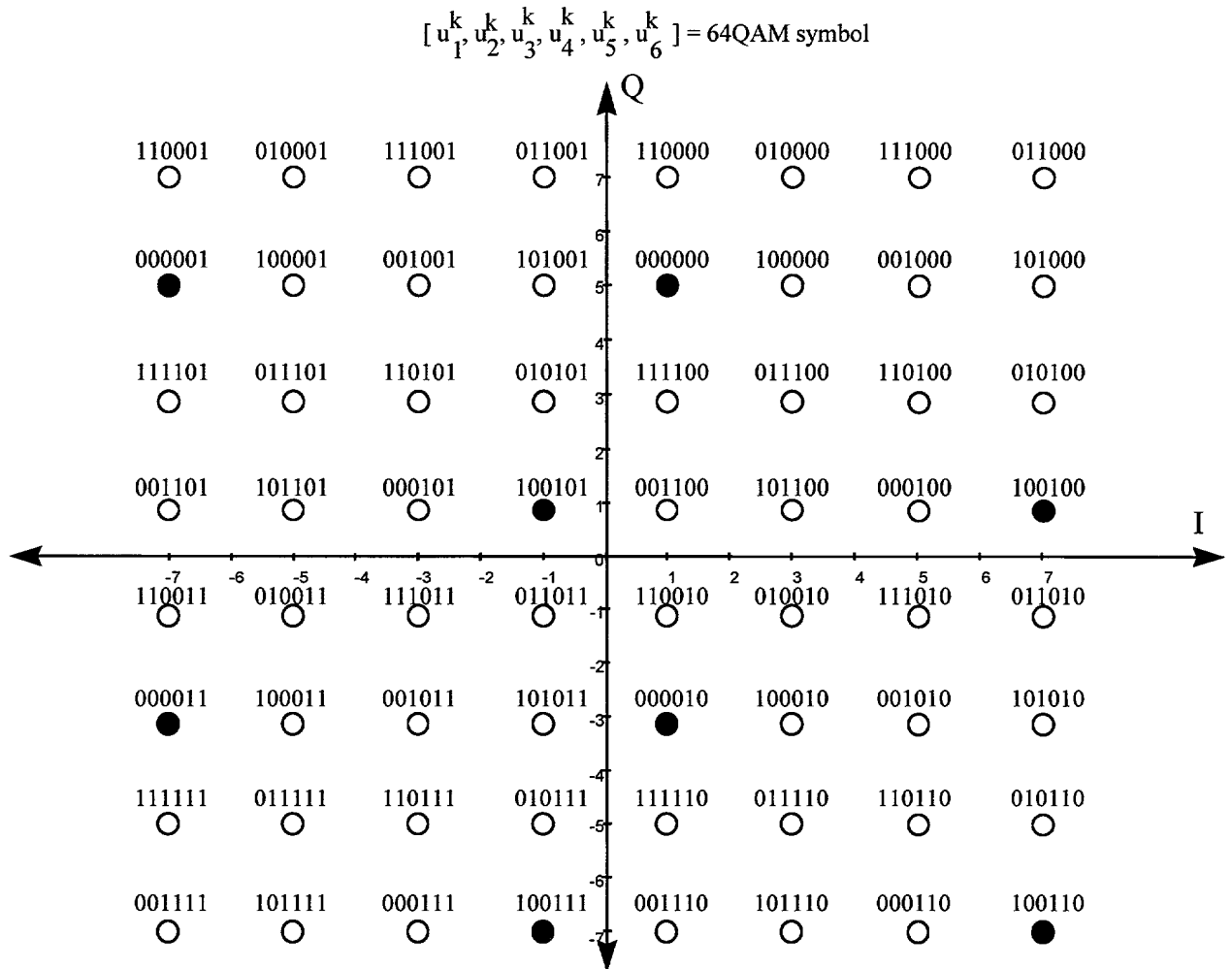


Figure 39



- This 4 point constellation is selected by the four coded bits 0000
- Each of the four points of the 1001 constellation is selected by two uncoded bits using Gray mapping

Figure 40

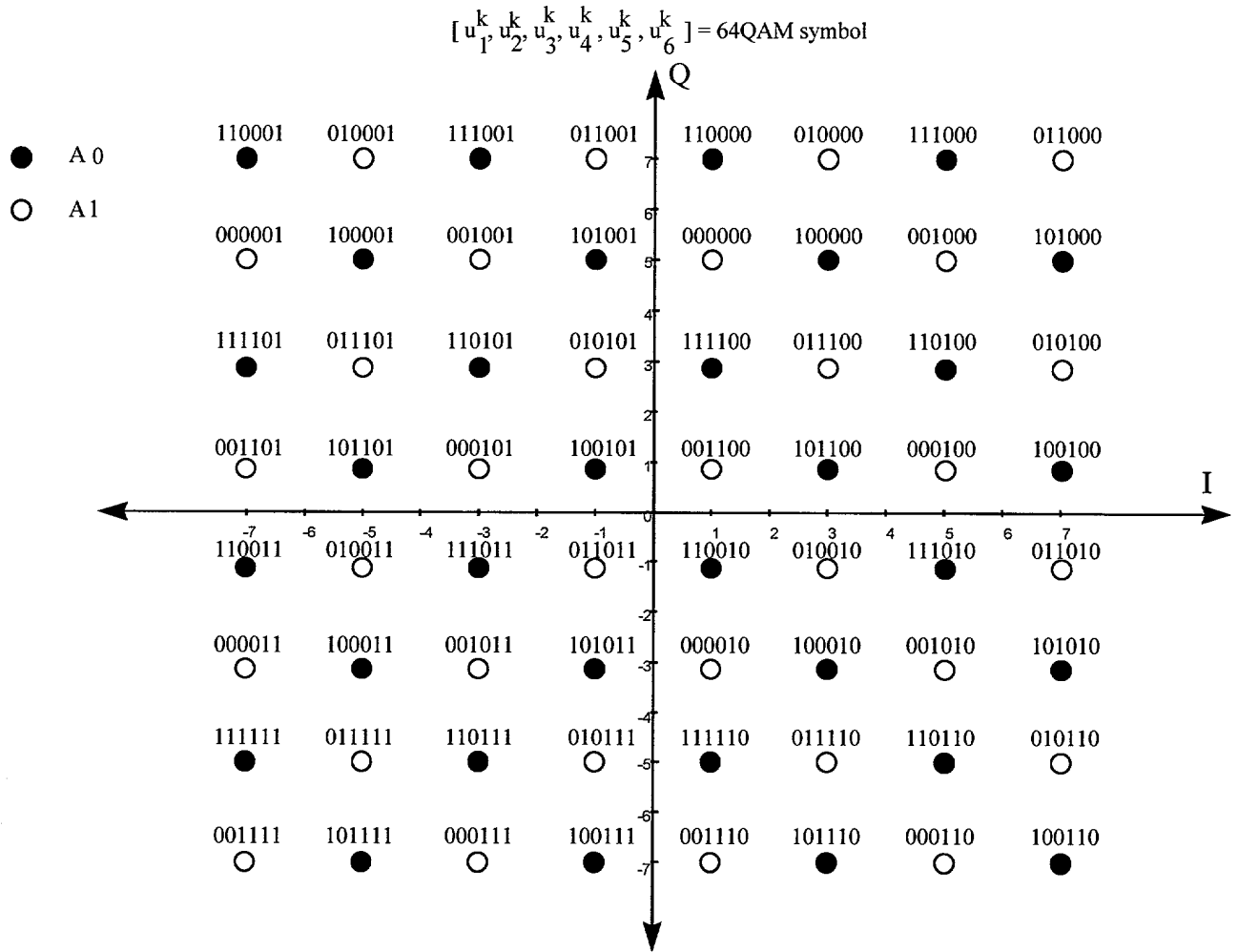


Figure 41

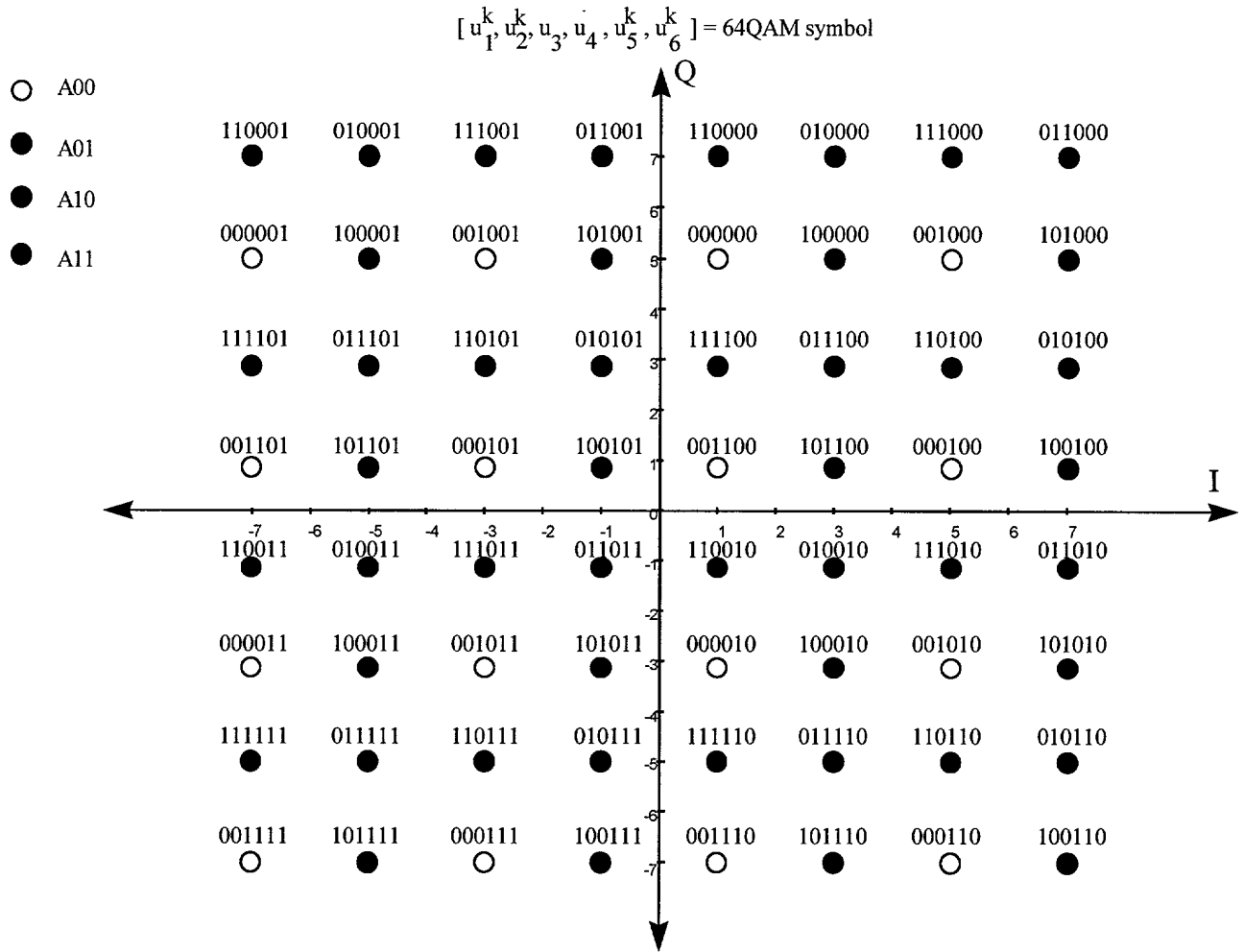


Figure 42

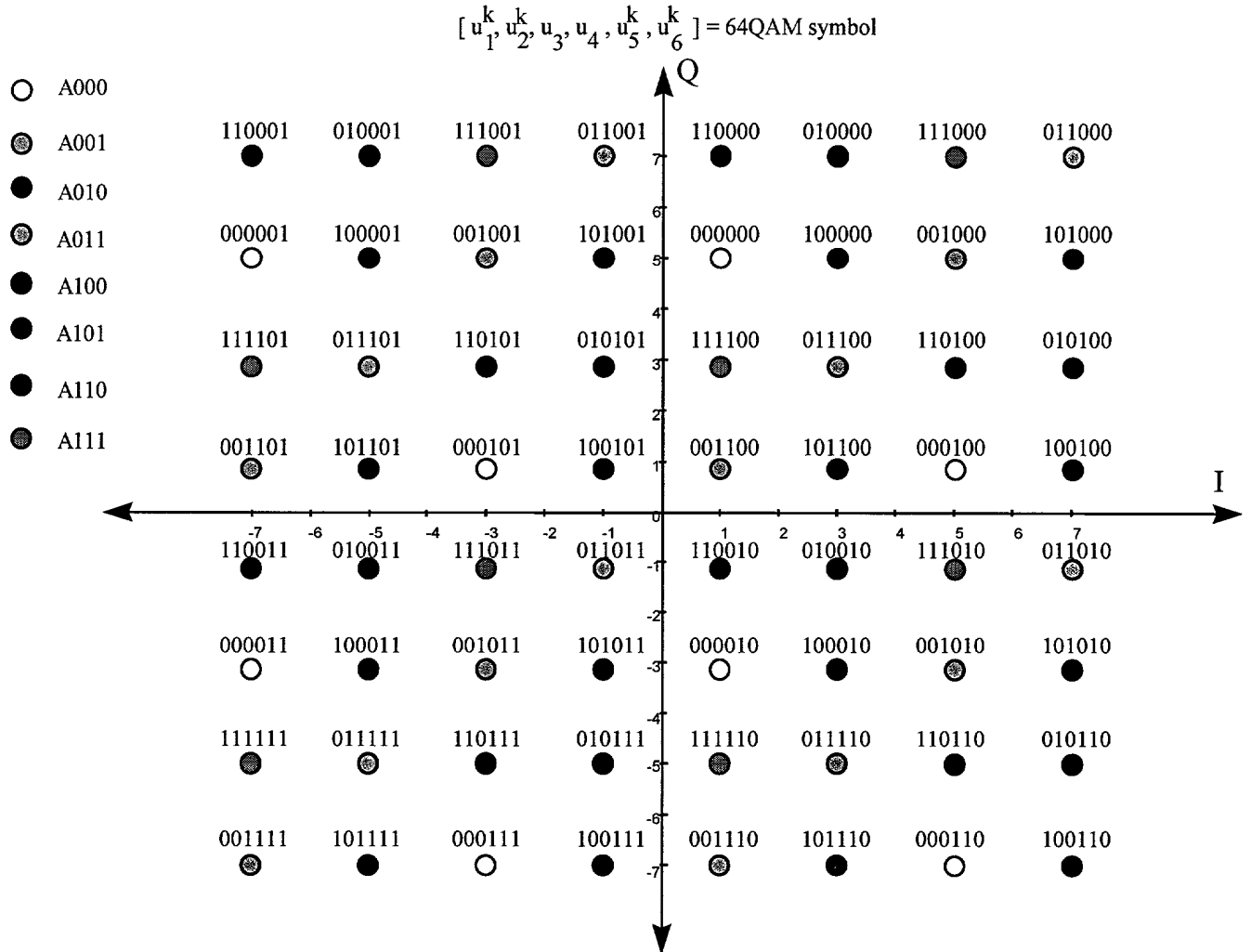


Figure 43

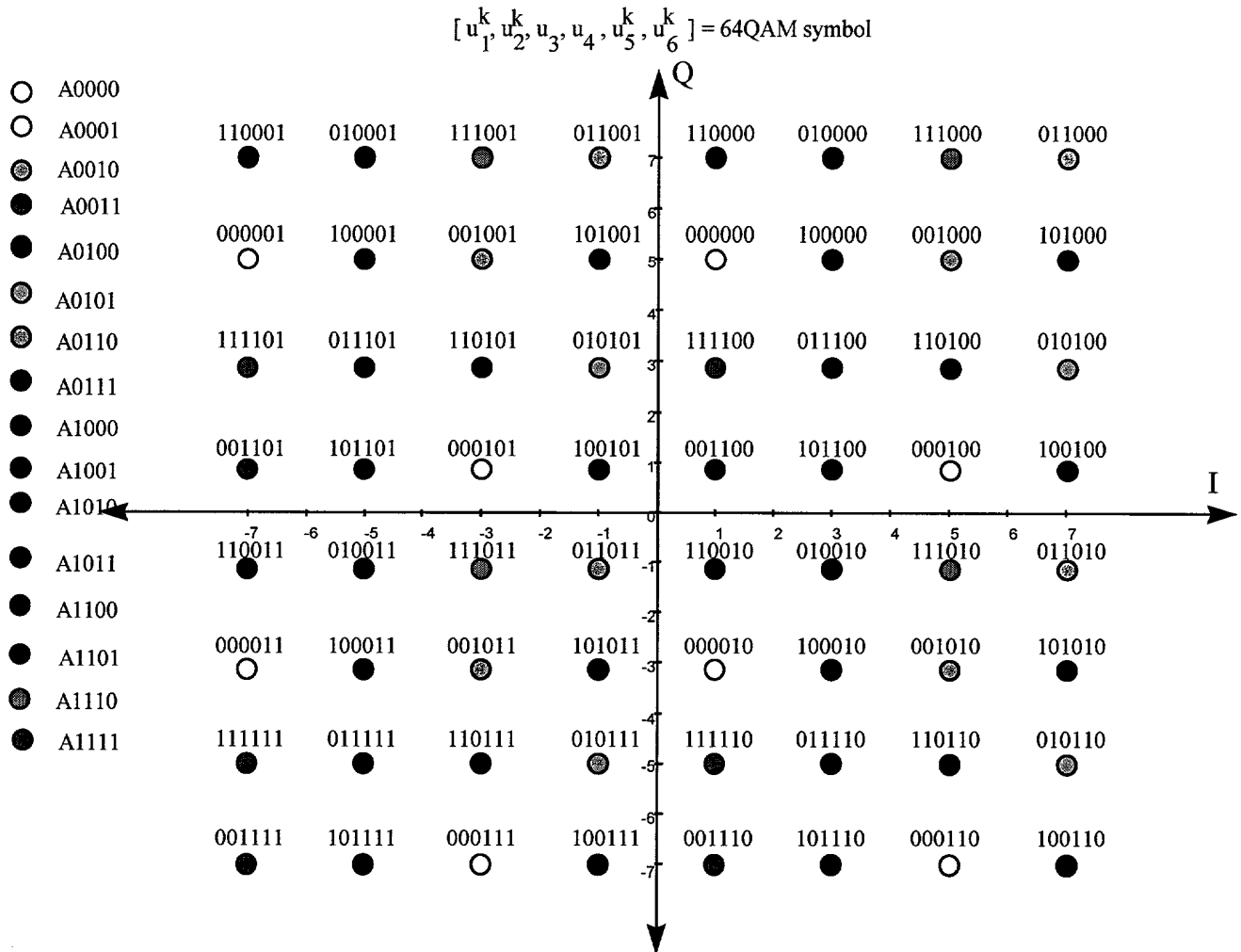


Figure 44



BER for Rate 4/6 64QAM N=4,096 bits AWGN Channel

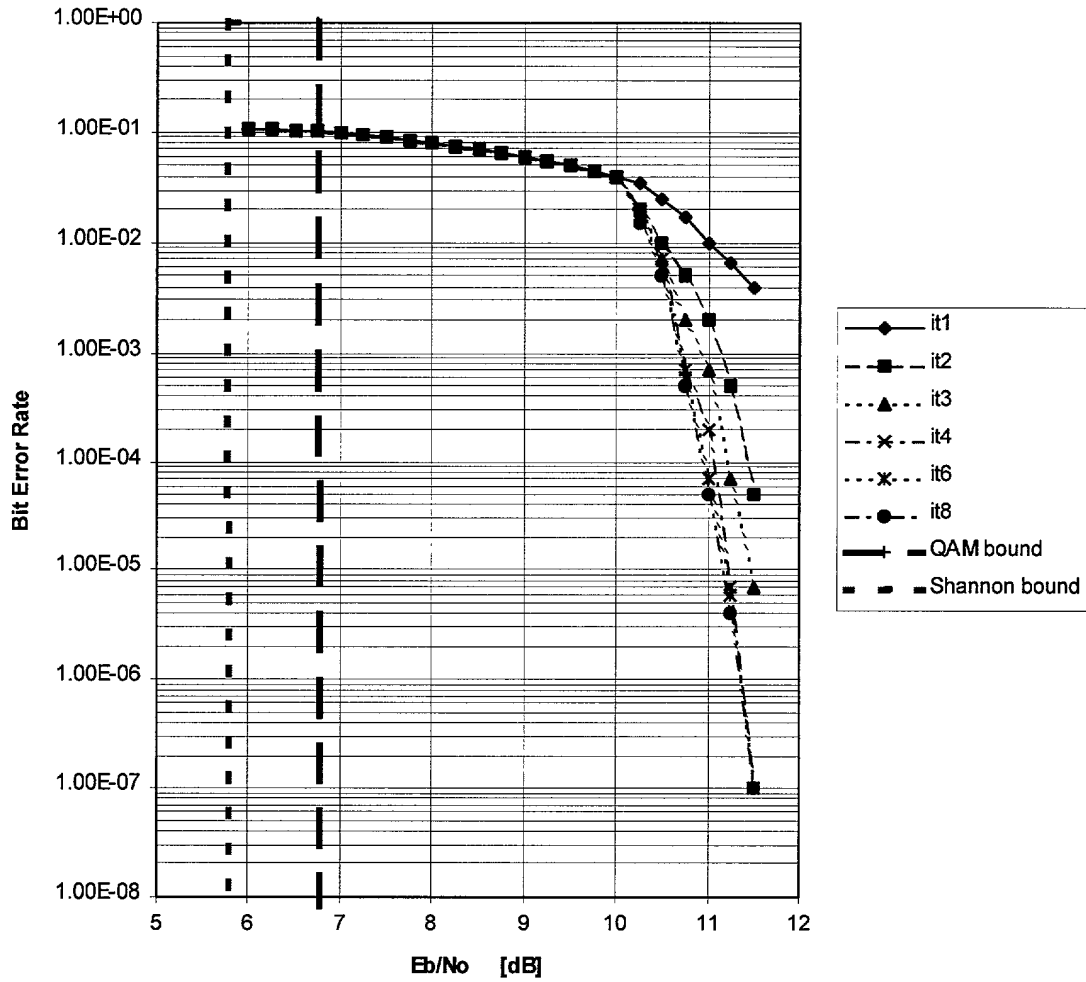


Figure 45

BER for Rate 5/6 64QAM N=5,120 bits AWGN Channel

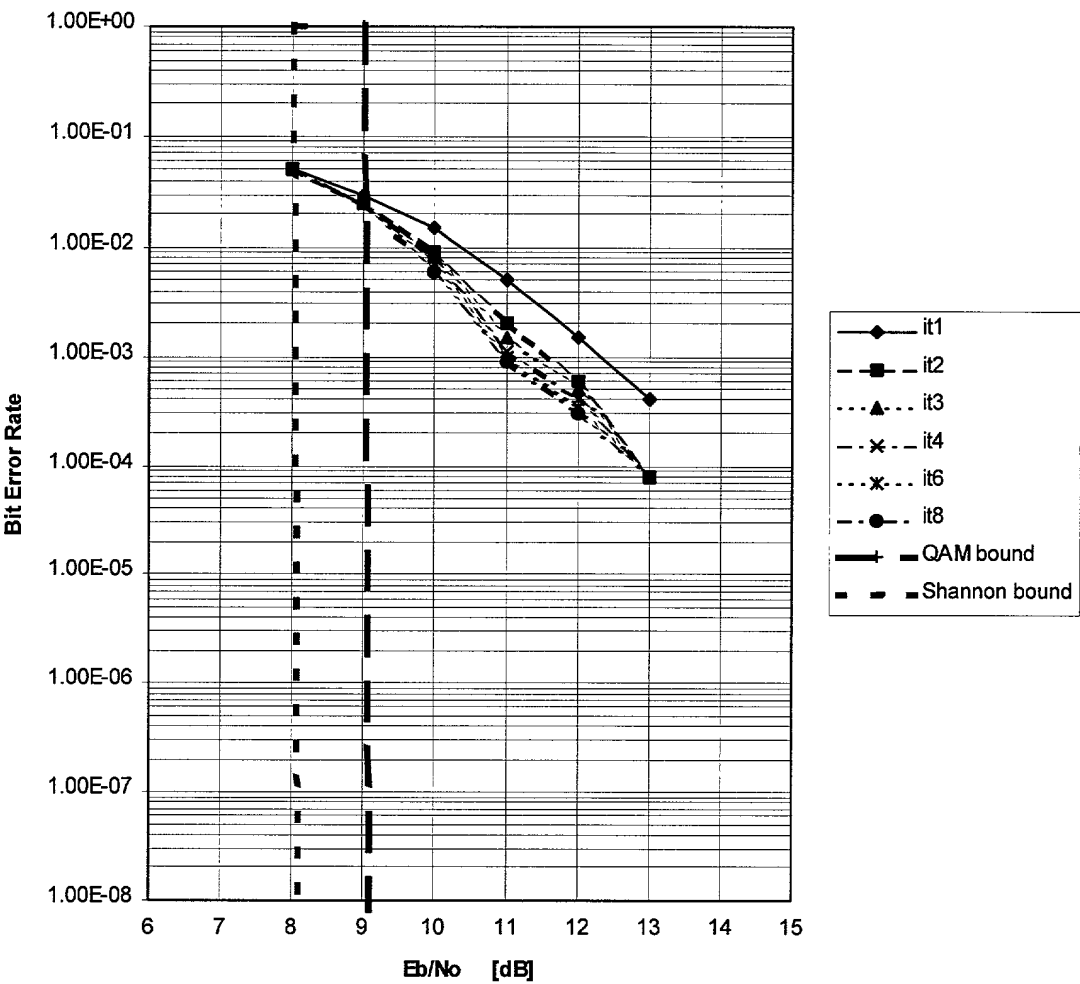


Figure 46

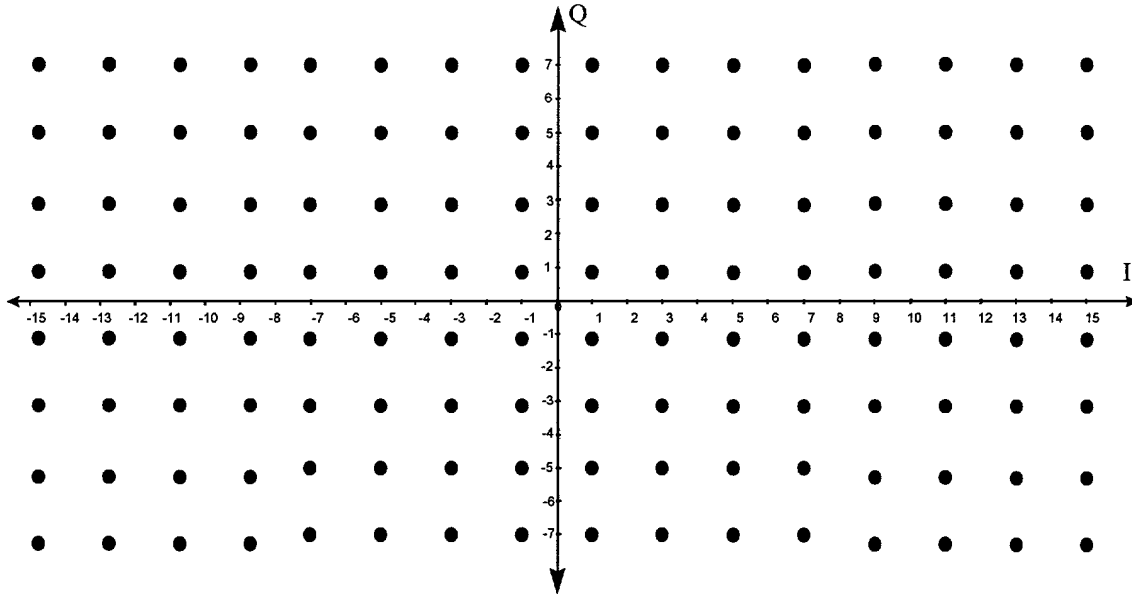


Figure 47

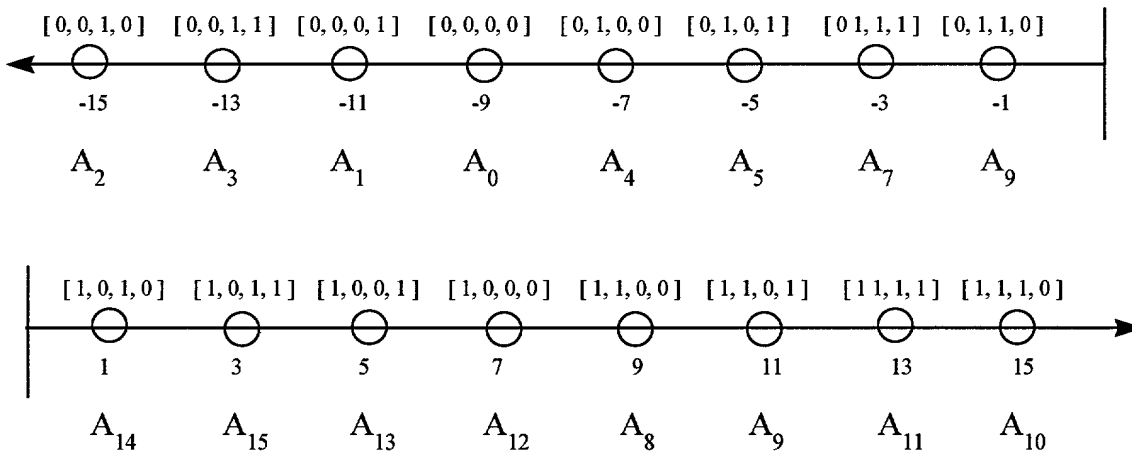


Figure 48

BER for Rate 5/7 128QAM N=5,120 bits AWGN Channel

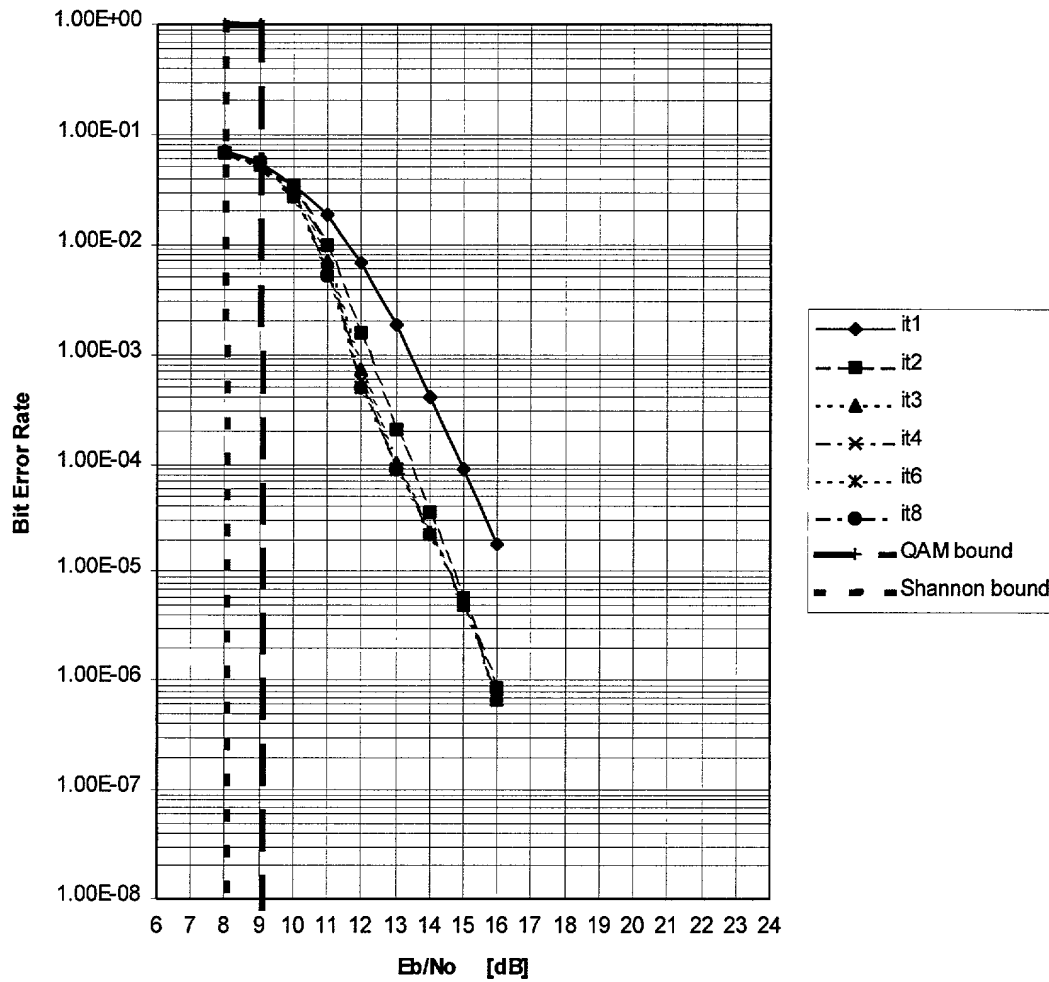


Figure 49

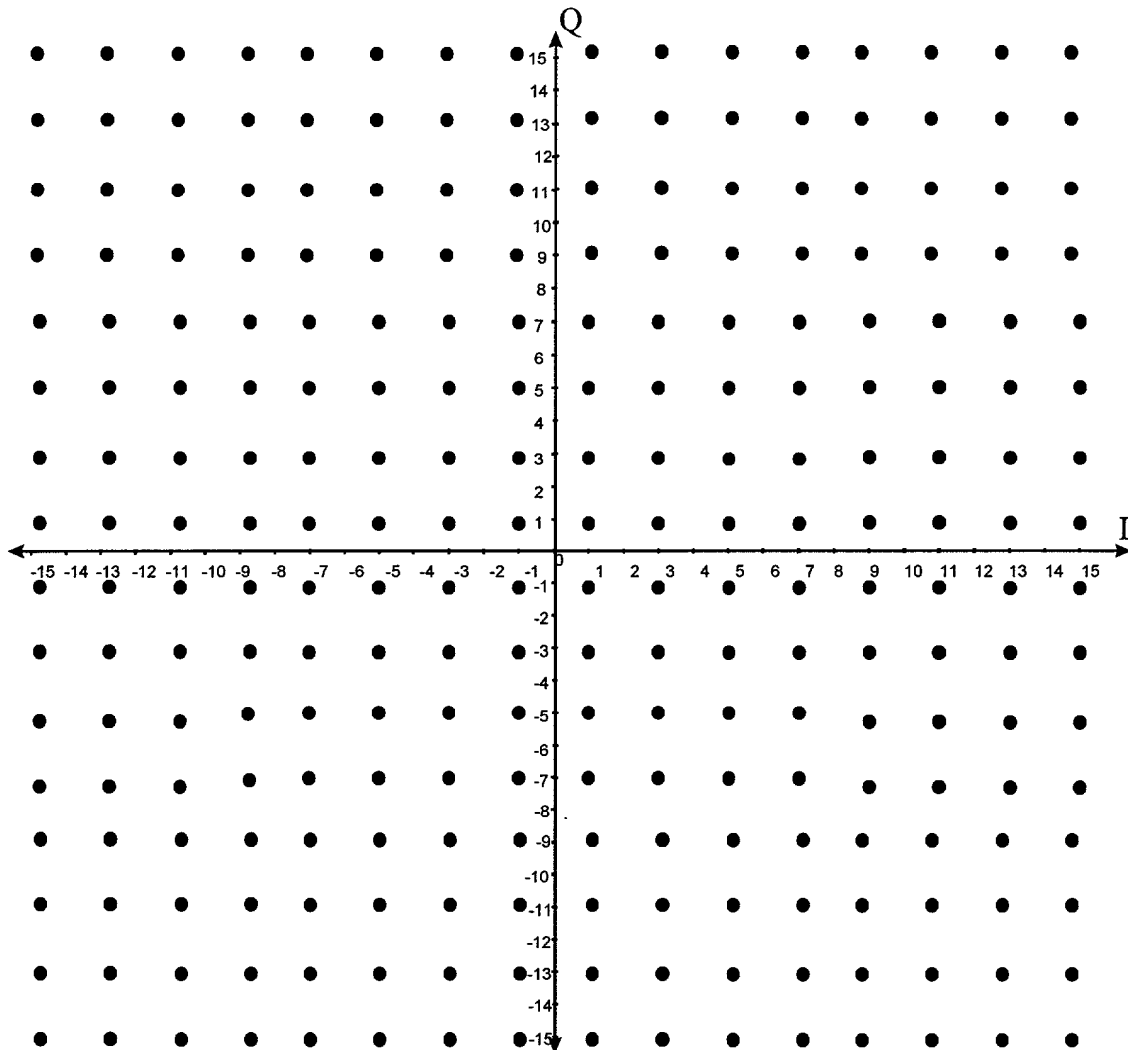


Figure 50

BER for Rate 5/8 256QAM N=5,120 bits AWGN Channel

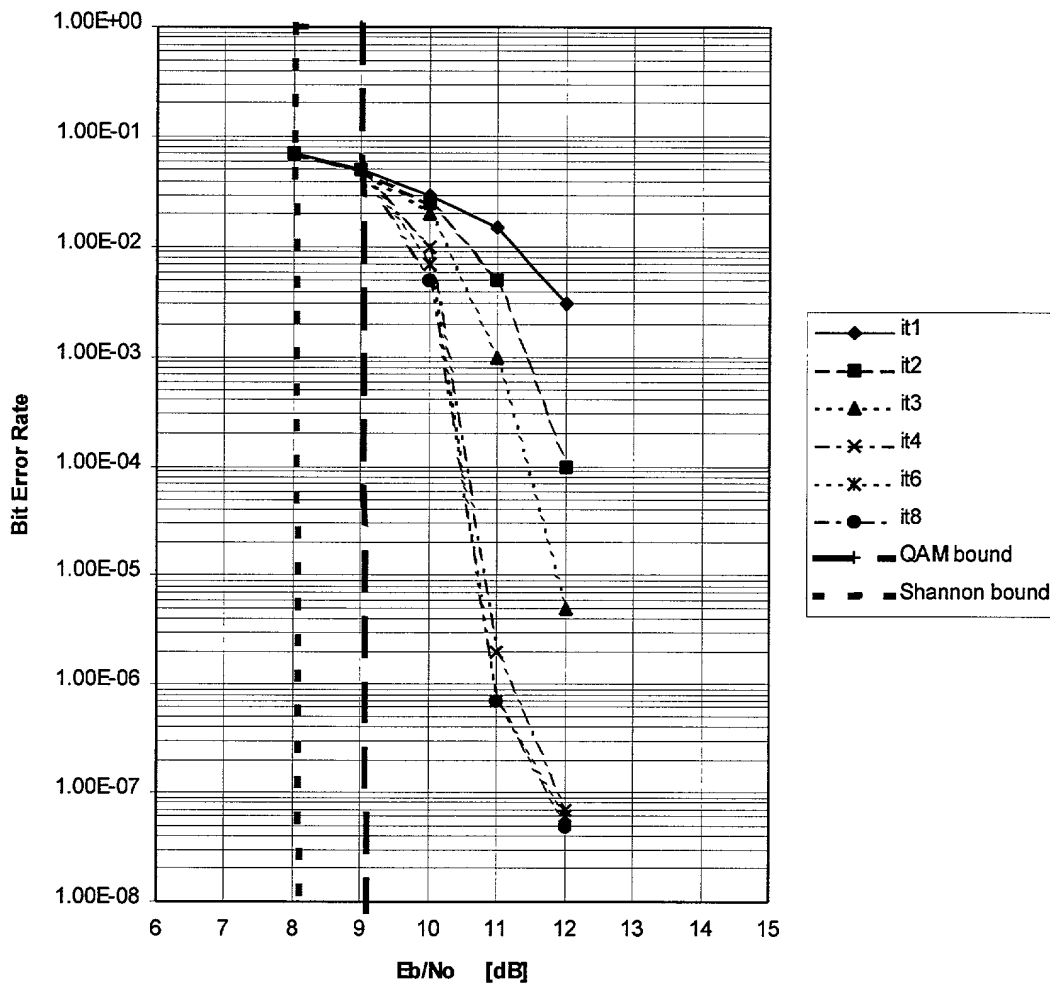


Figure 51

BER for Rate 6/8 256QAM N=6,144 bits AWGN Channel

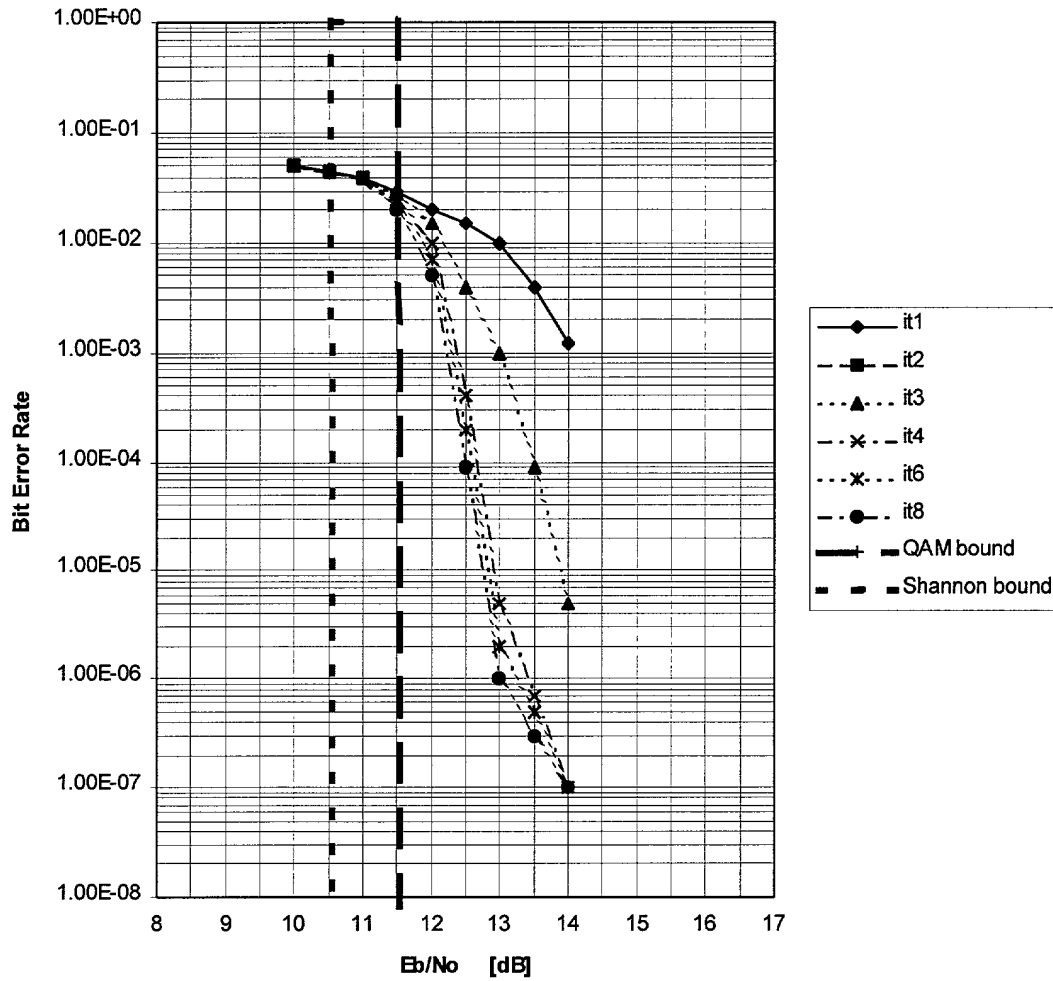


Figure 52

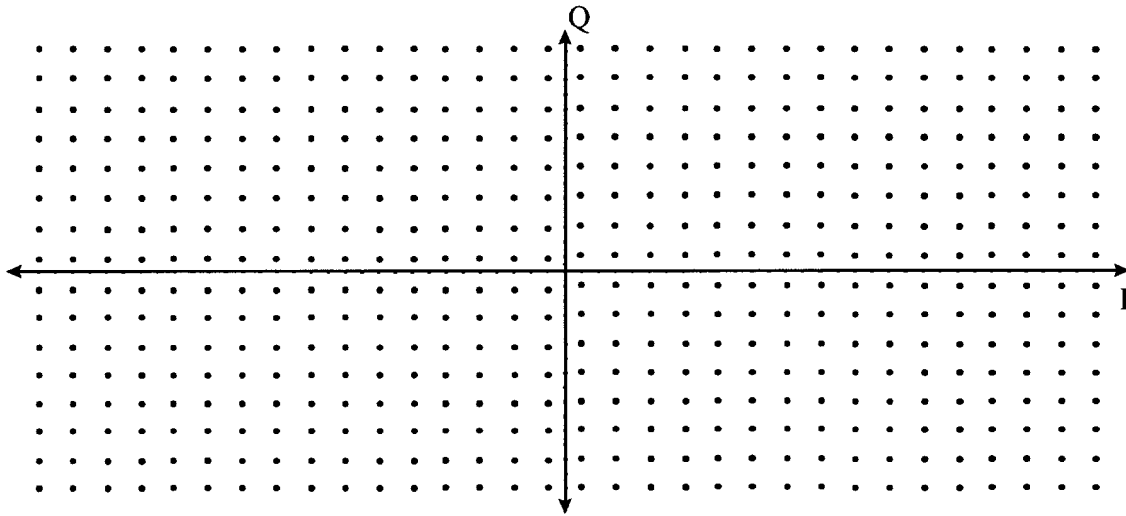


Figure 53



BER for Rate 6/9 512QAM N=6,144 bits AWGN Channel

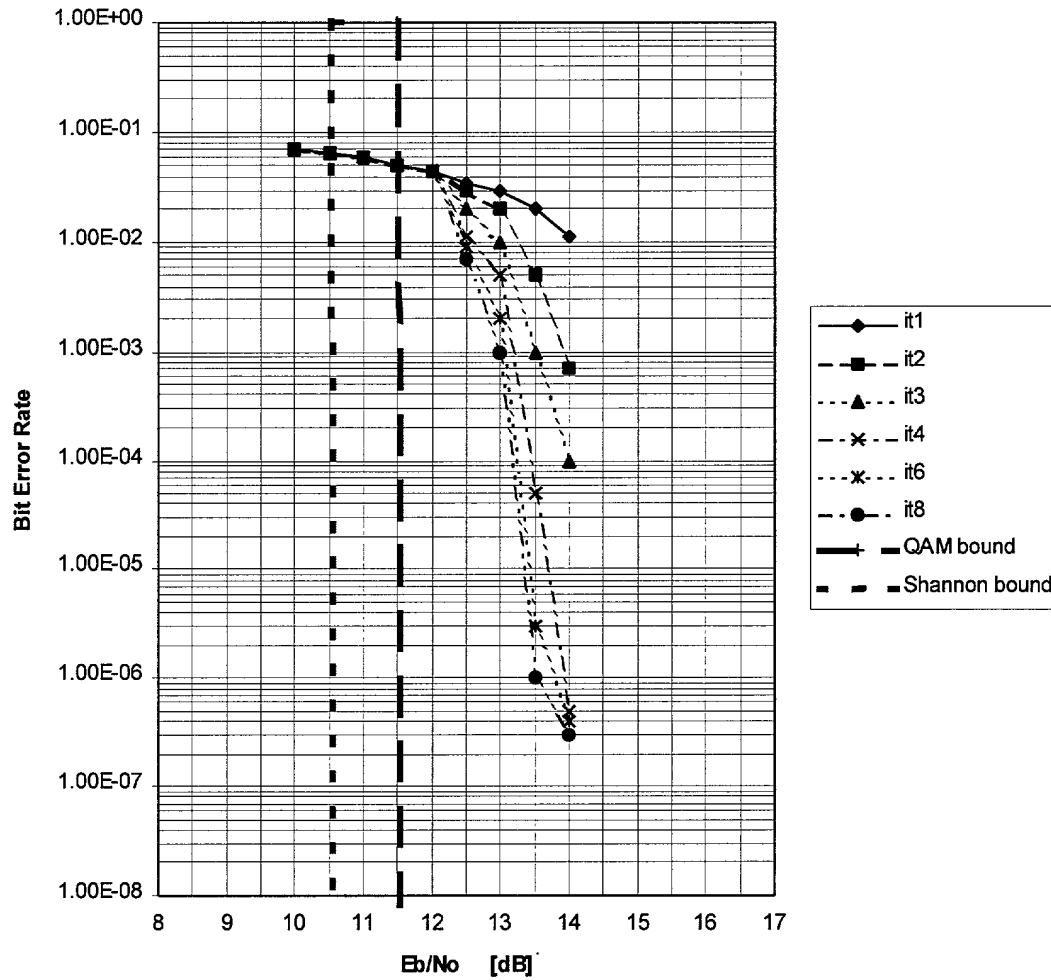


Figure 54

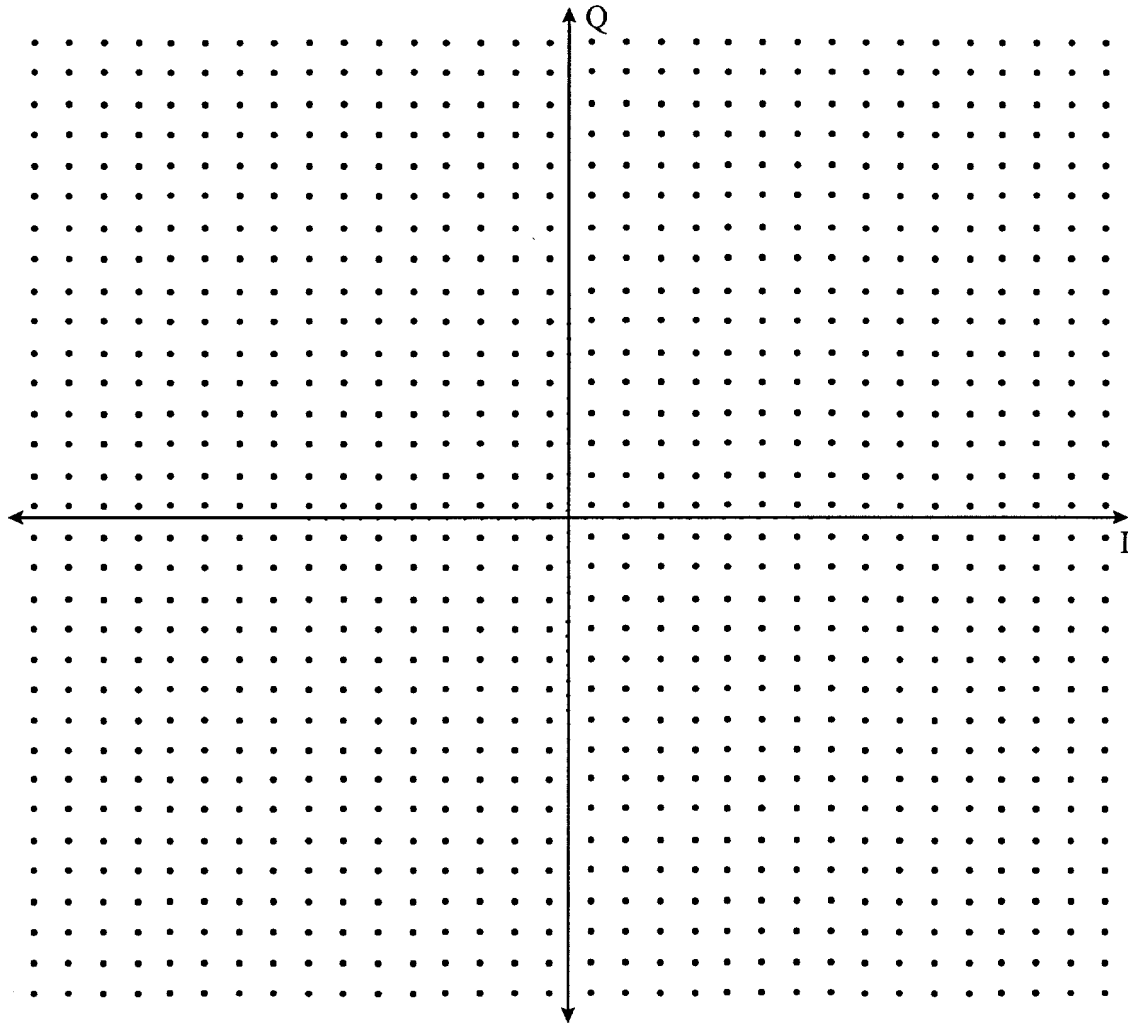


Figure 55

BER for Rate 7/10 1024QAM N=2,044 bits AWGN Channel

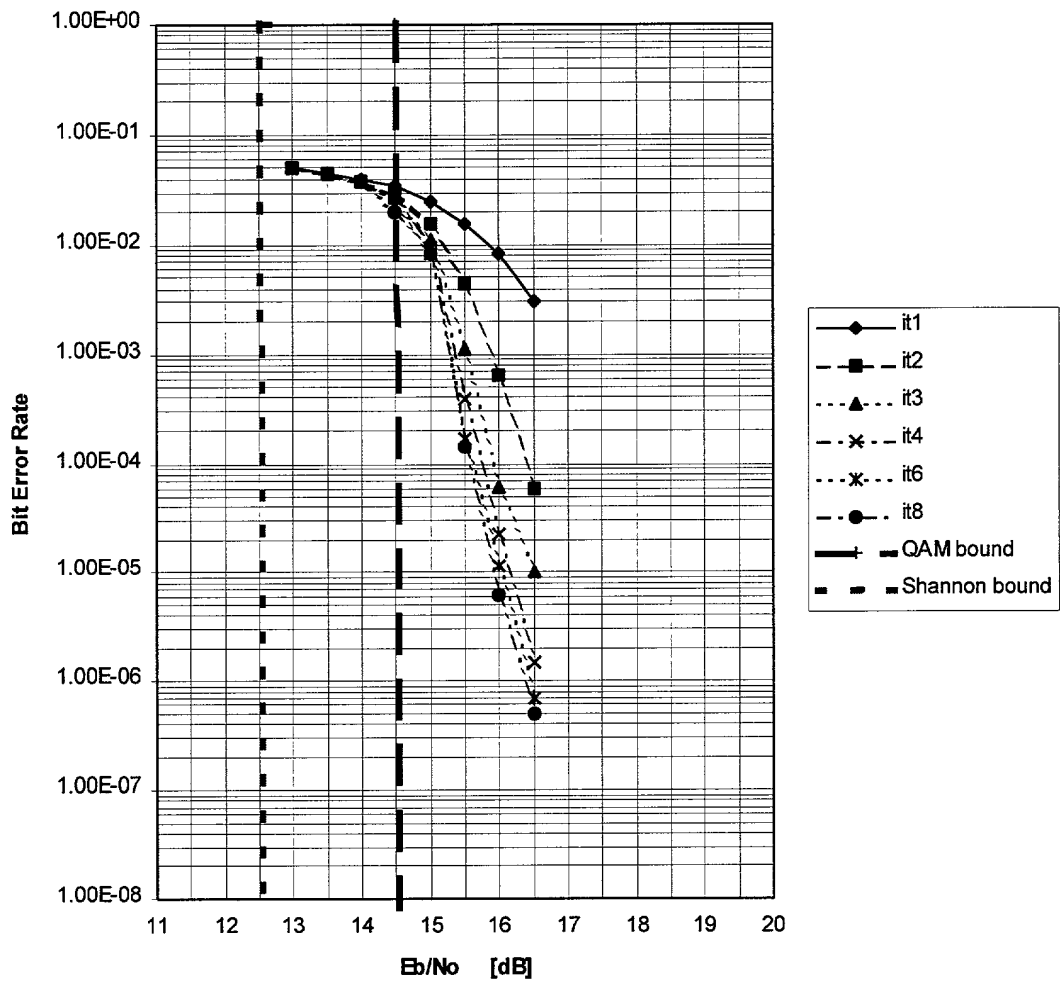


Figure 56

# BER for Rate 12/14 16384QAM N=31200 bits AWGN Channel

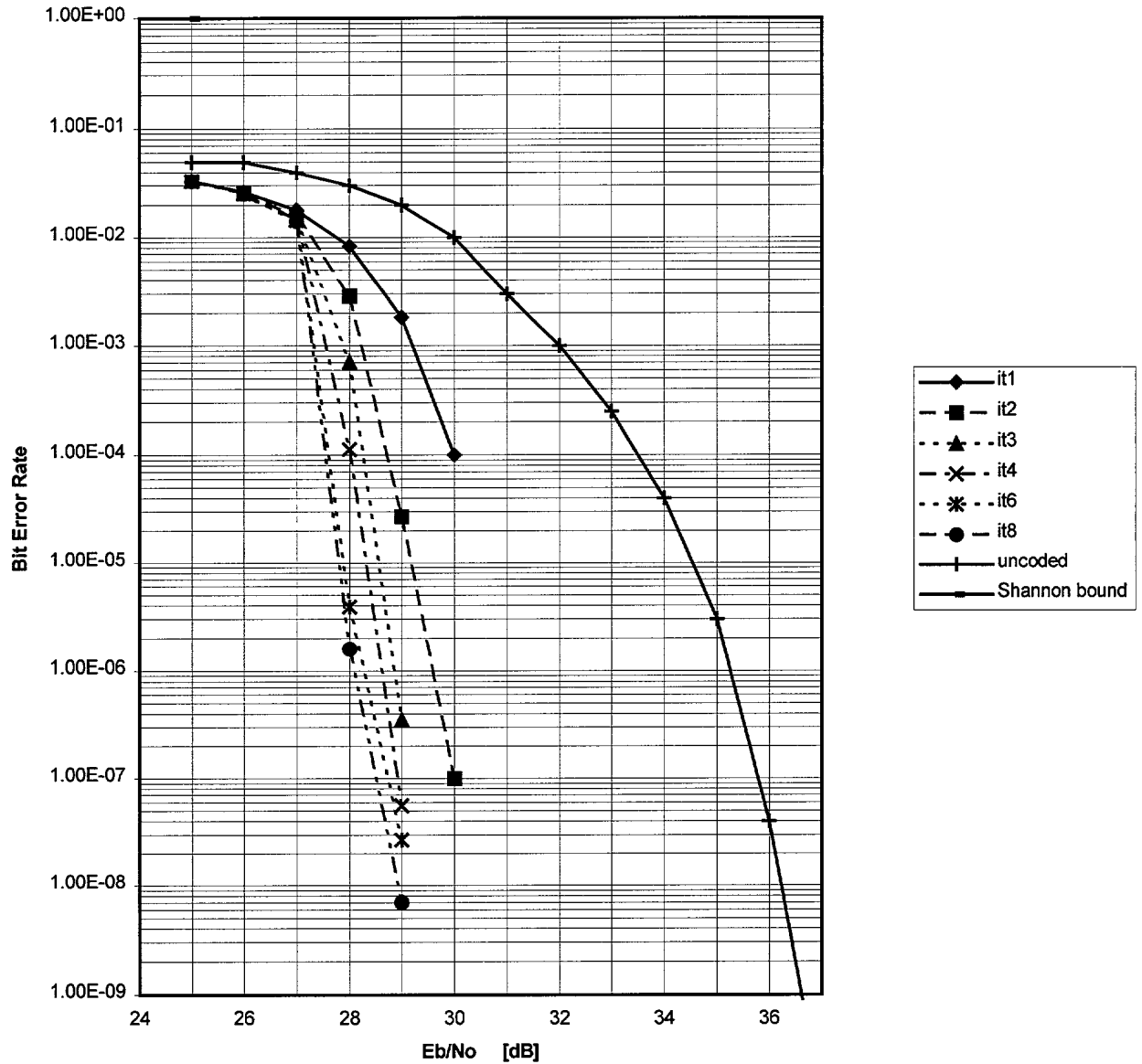


Figure 57

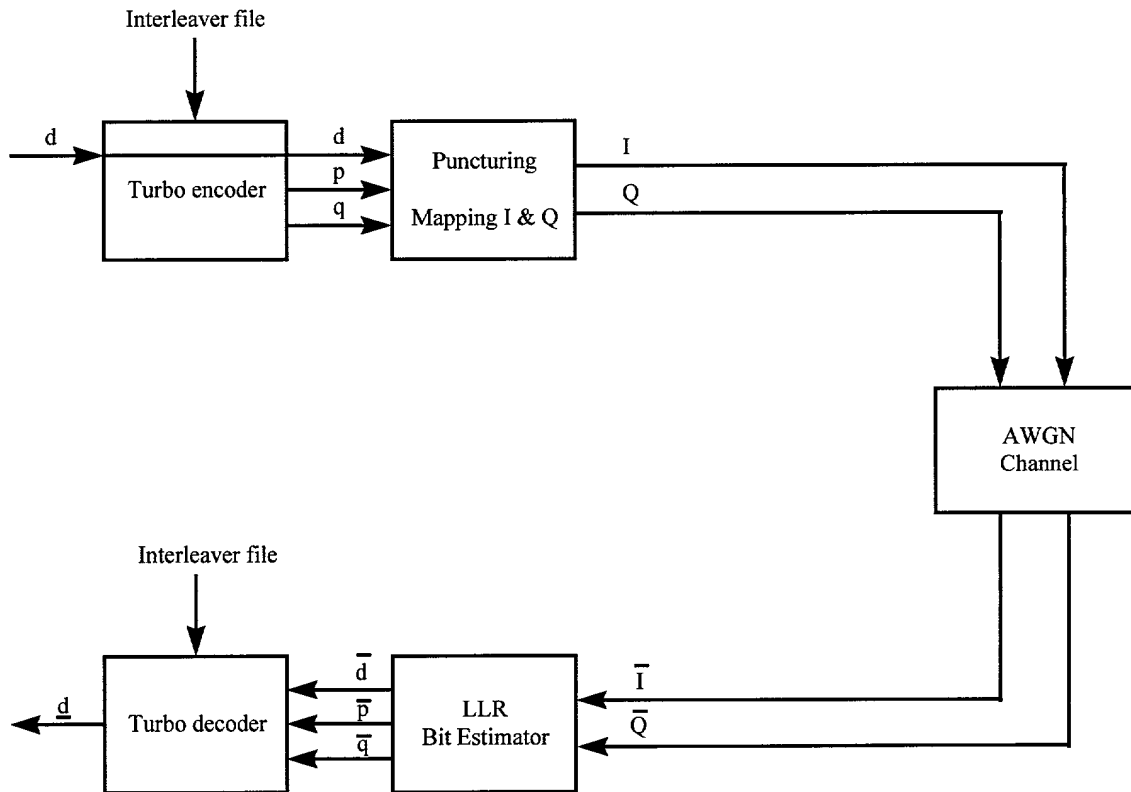


Figure 58

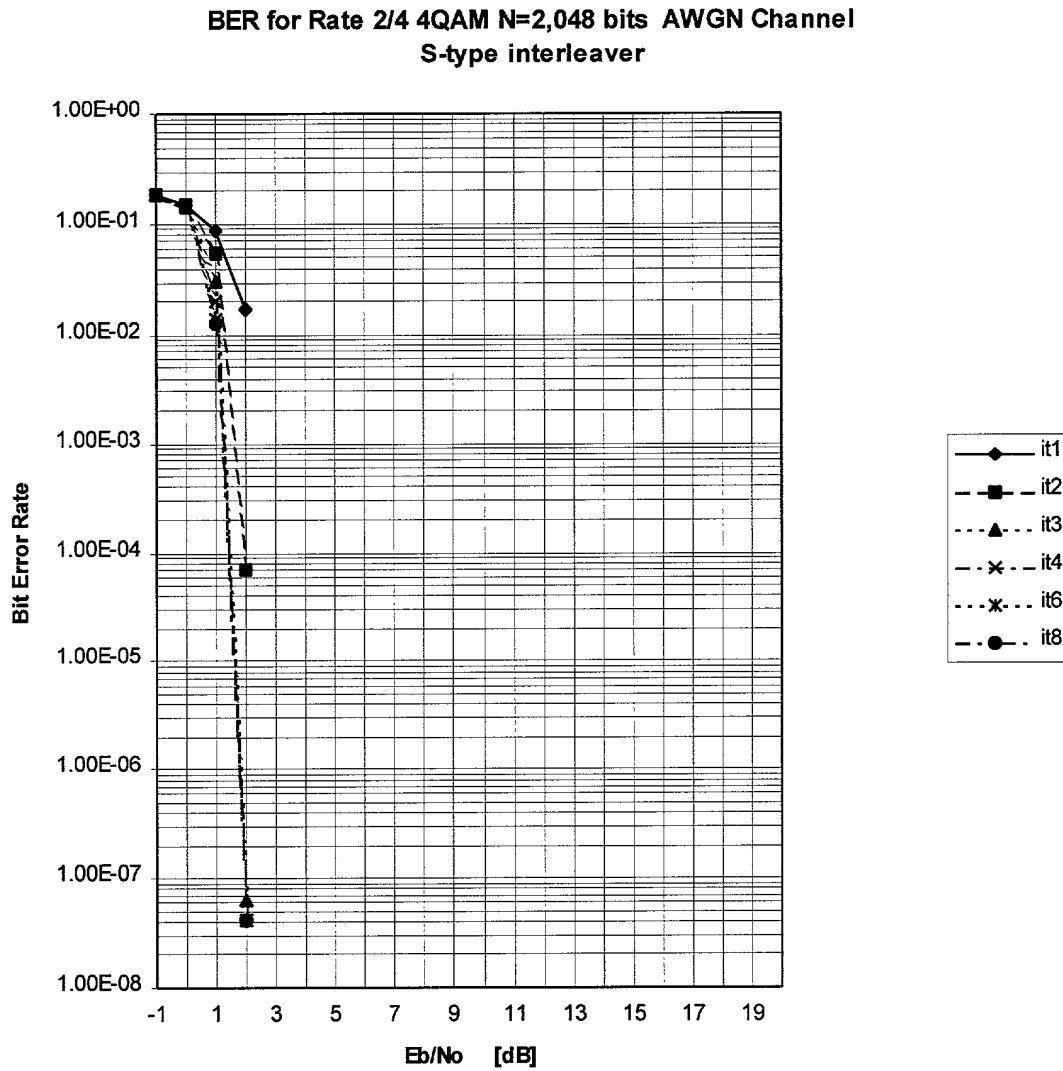


Figure 59

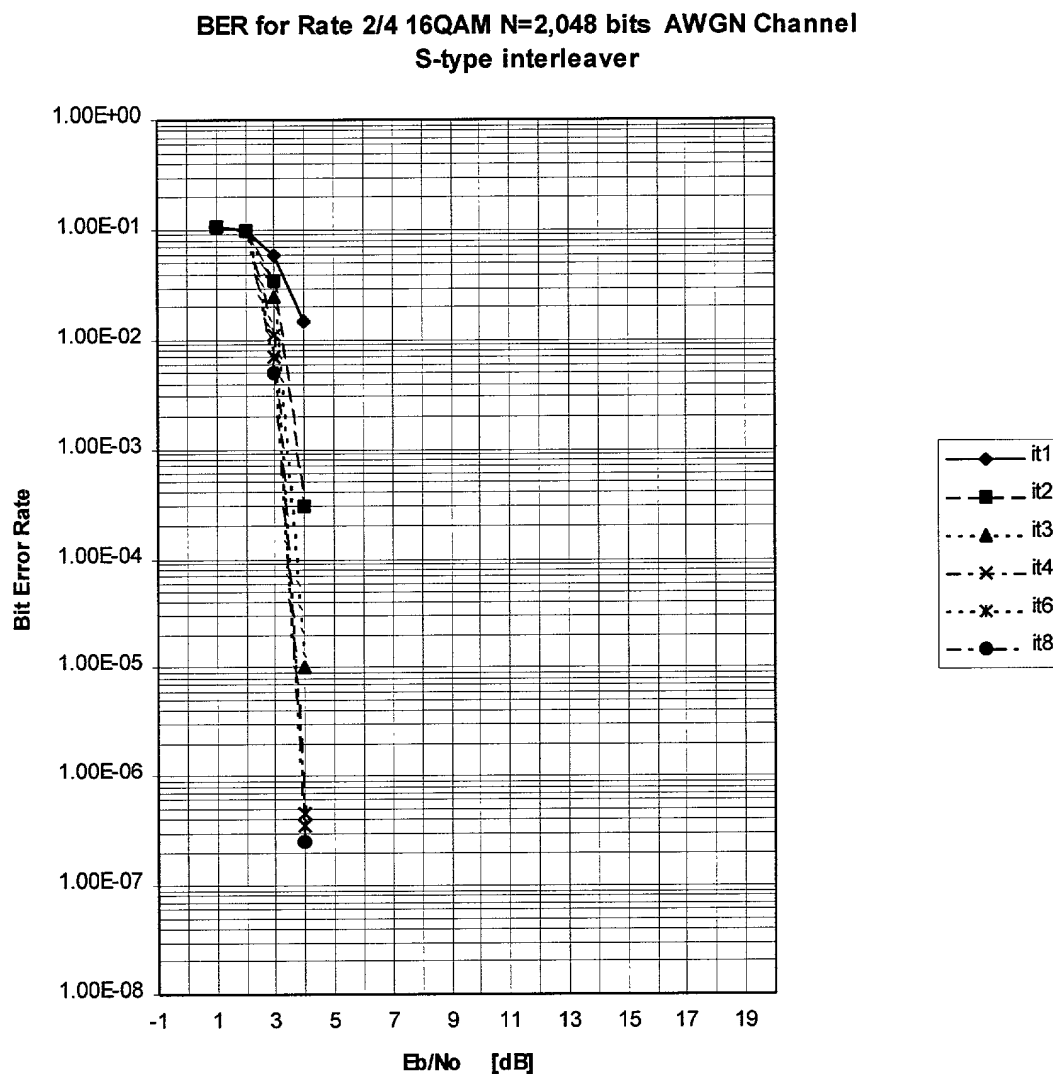


Figure 60

BER for Rate 3/4 16QAM N=2,048 bits AWGN Channel  
 S-type interleaver

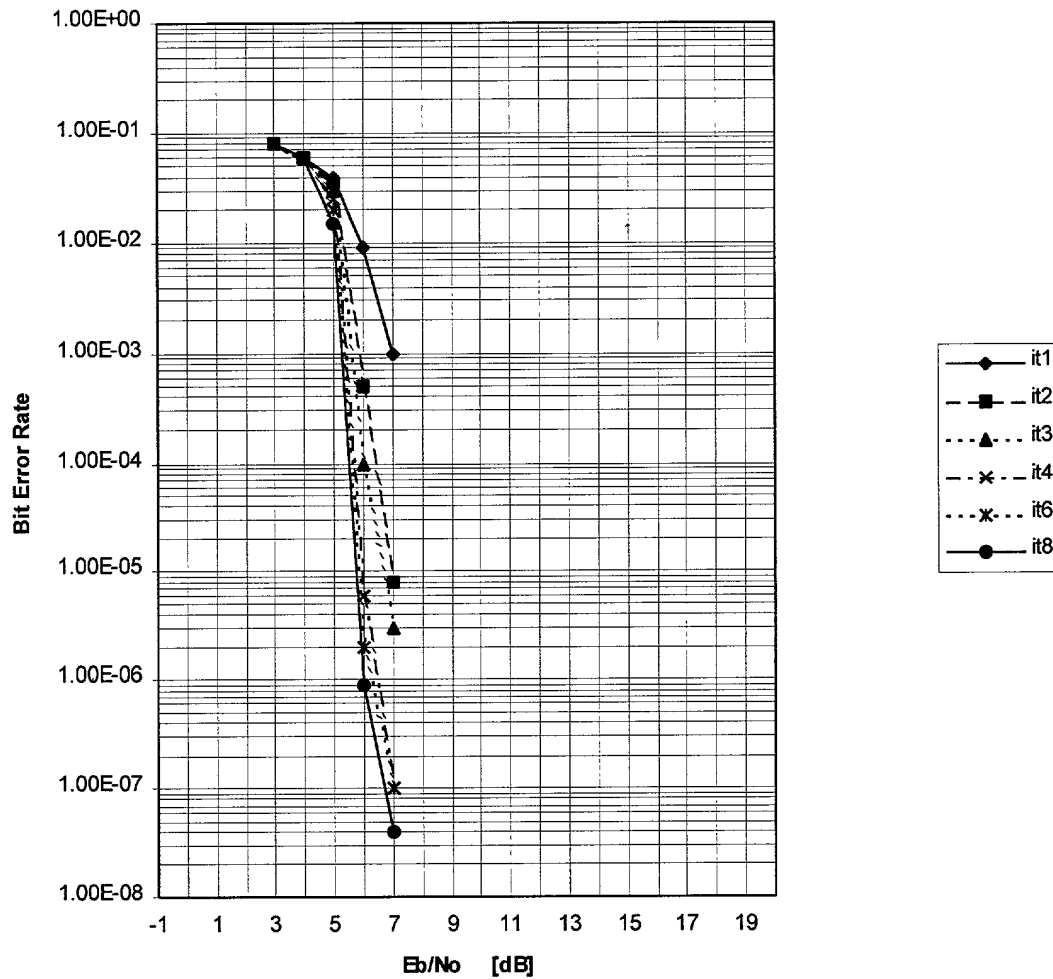


Figure 61



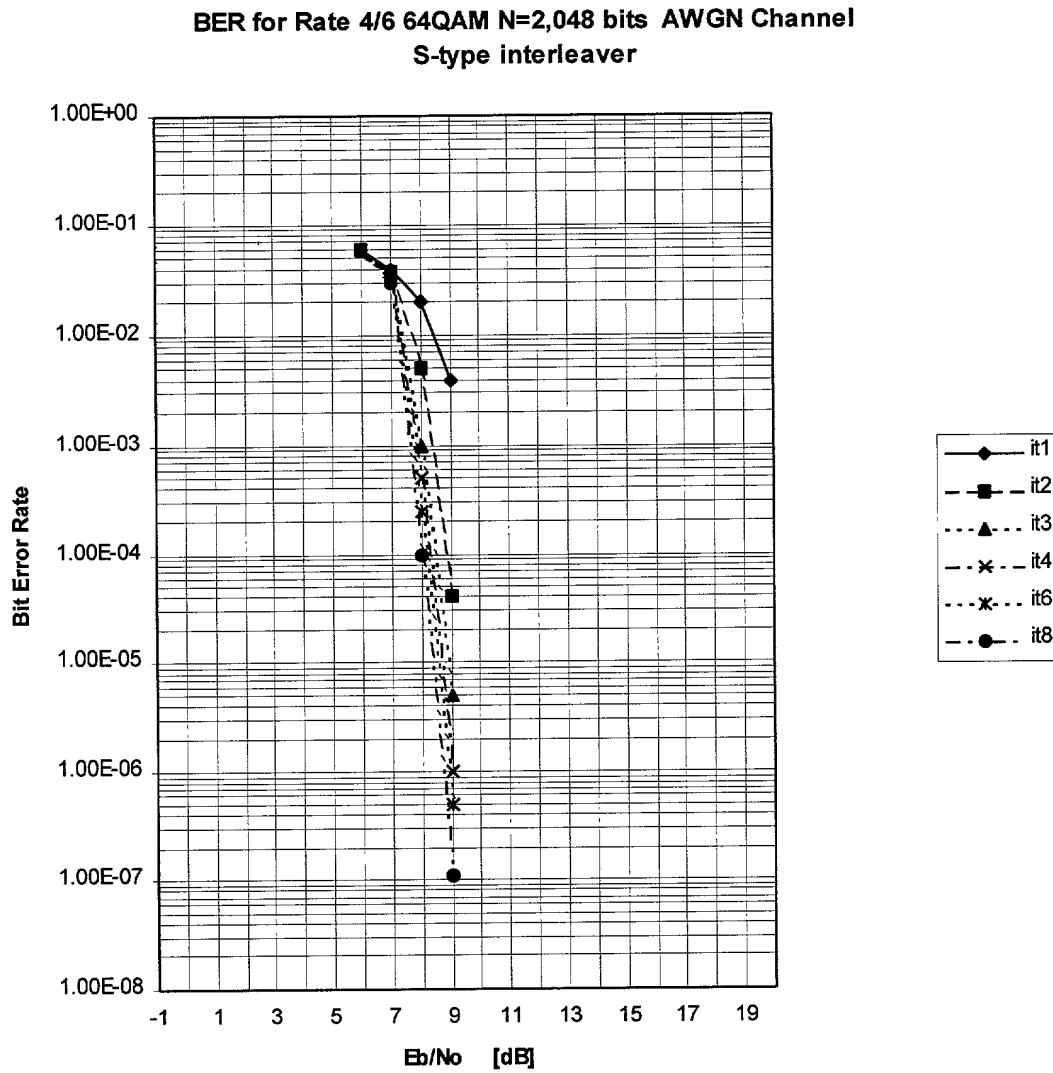


Figure 62

BER for Rate 5/8 256QAM N=2,048 bits AWGN Channel  
 S-type interleaver

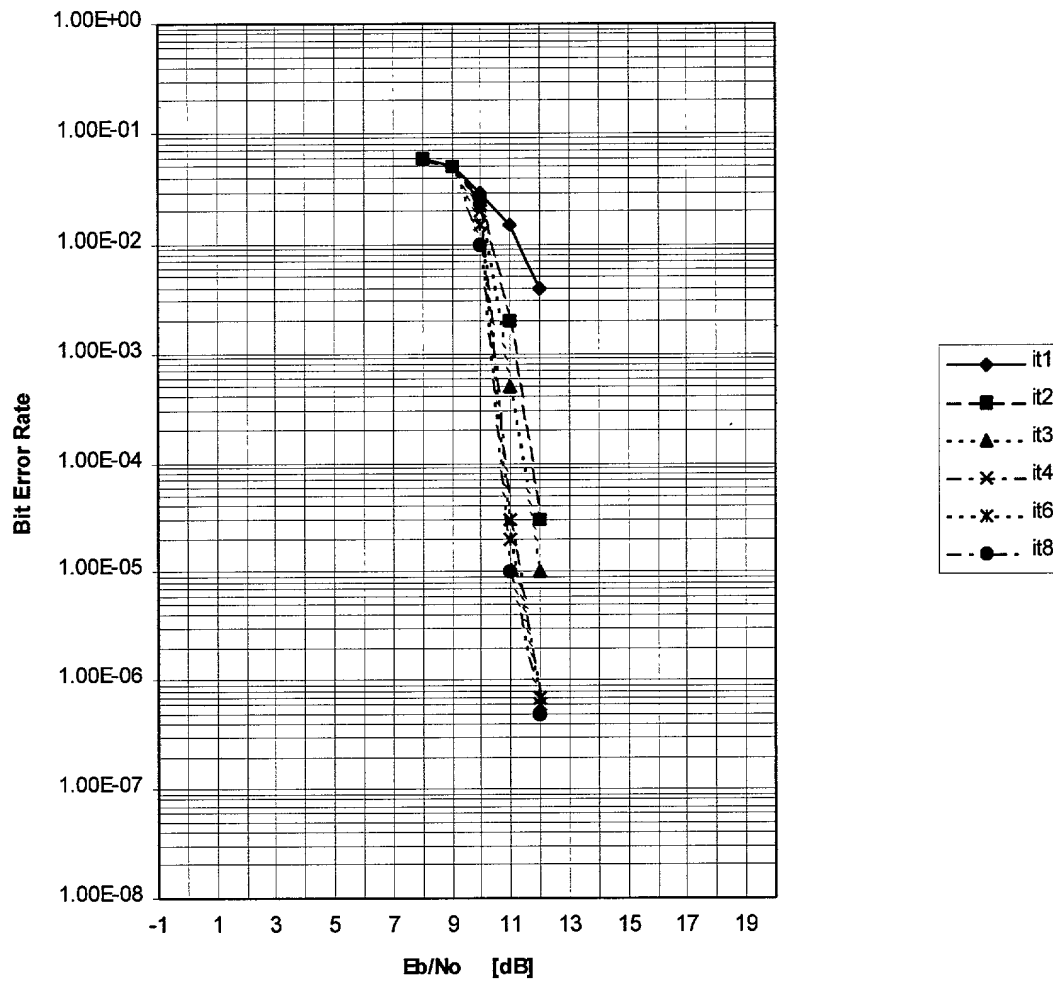


Figure 63

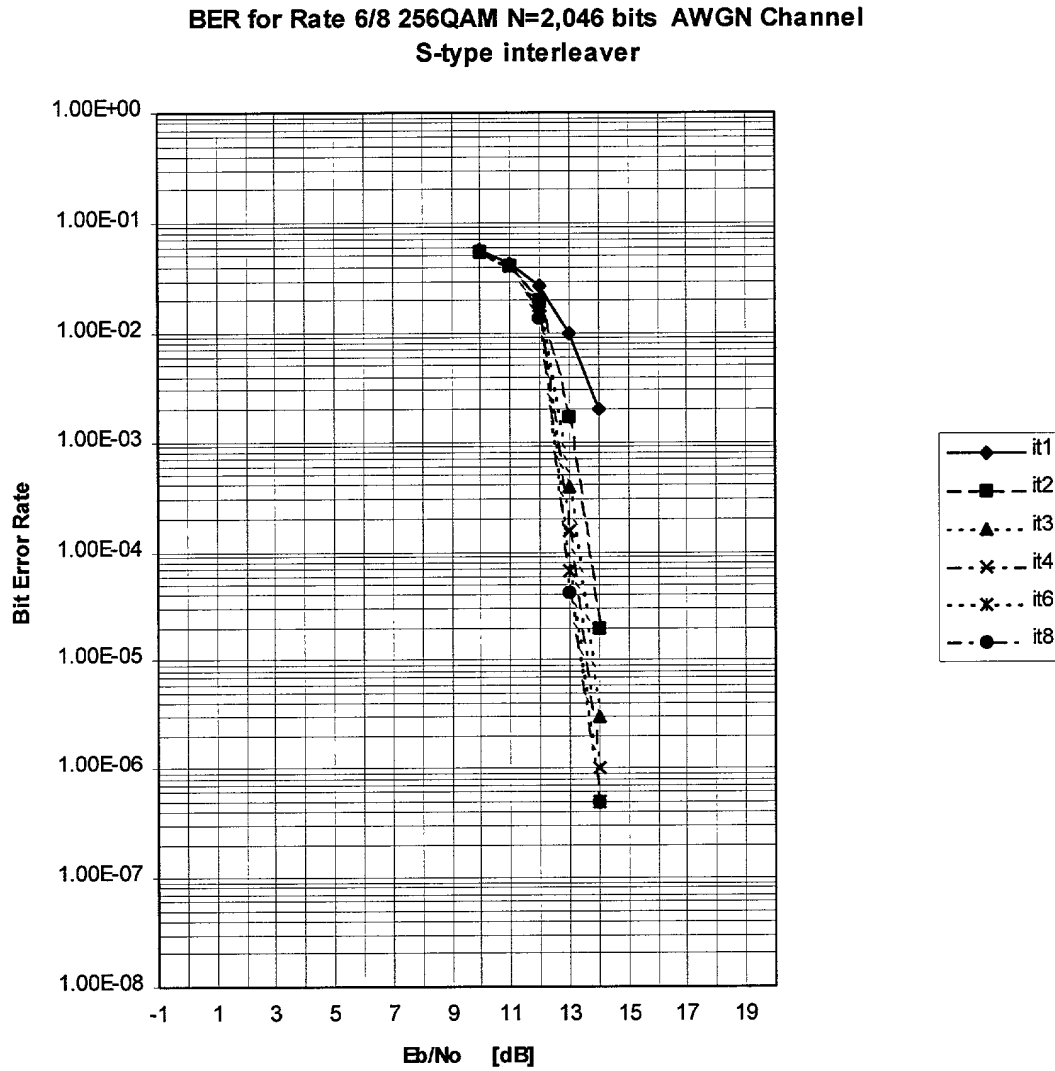


Figure 64

BER for Rate 7/10 1024QAM N=2,044 bits AWGN Channel  
S-type interleaver

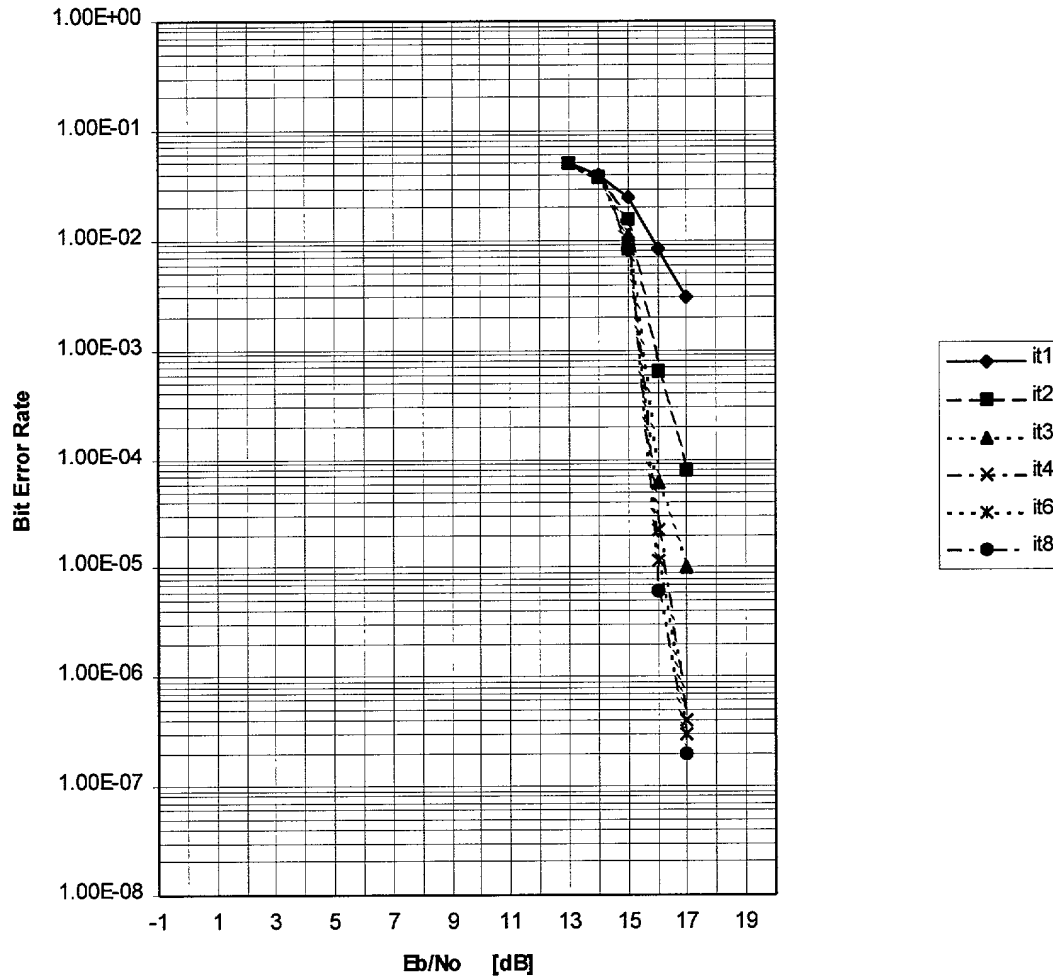


Figure 65

BER for Rate 2/4 QAM N=2,100 bits AWGN Channel  
 Analytical odd-even smile interleaver

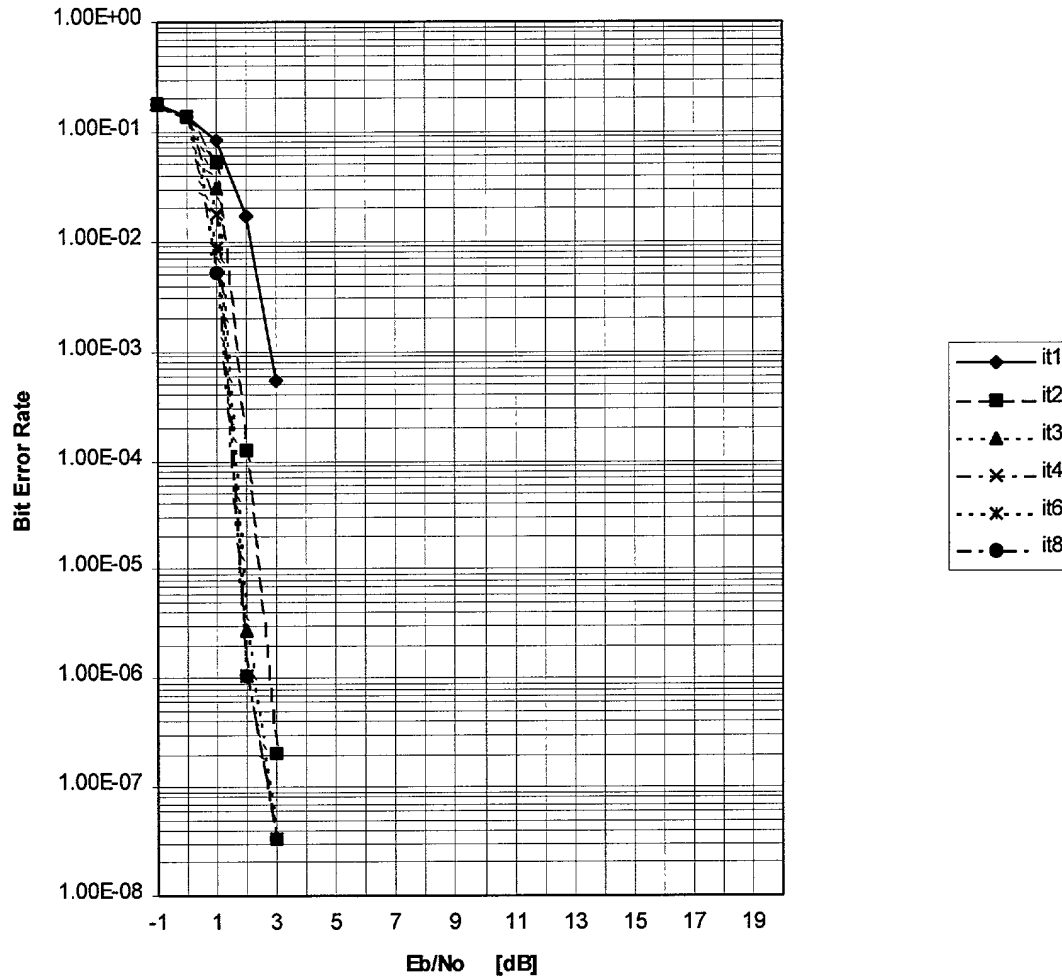


Figure 66

**BER for Rate 2/4 16QAM N=2,100 bits AWGN Channel**  
**Analytical odd-even smile interleaver**

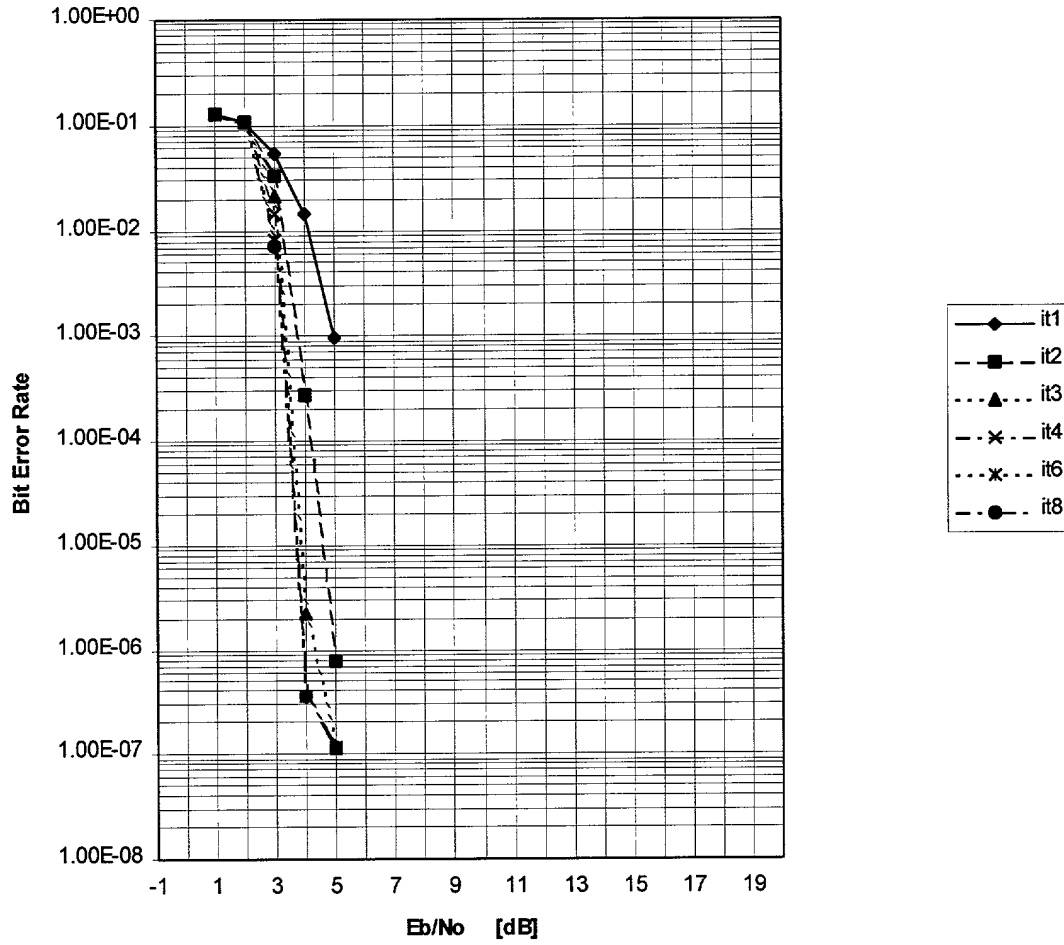


Figure 67

BER for Rate 3/4 16QAM N=2,100 bits AWGN Channel  
 Analytical odd-even smile interleaver

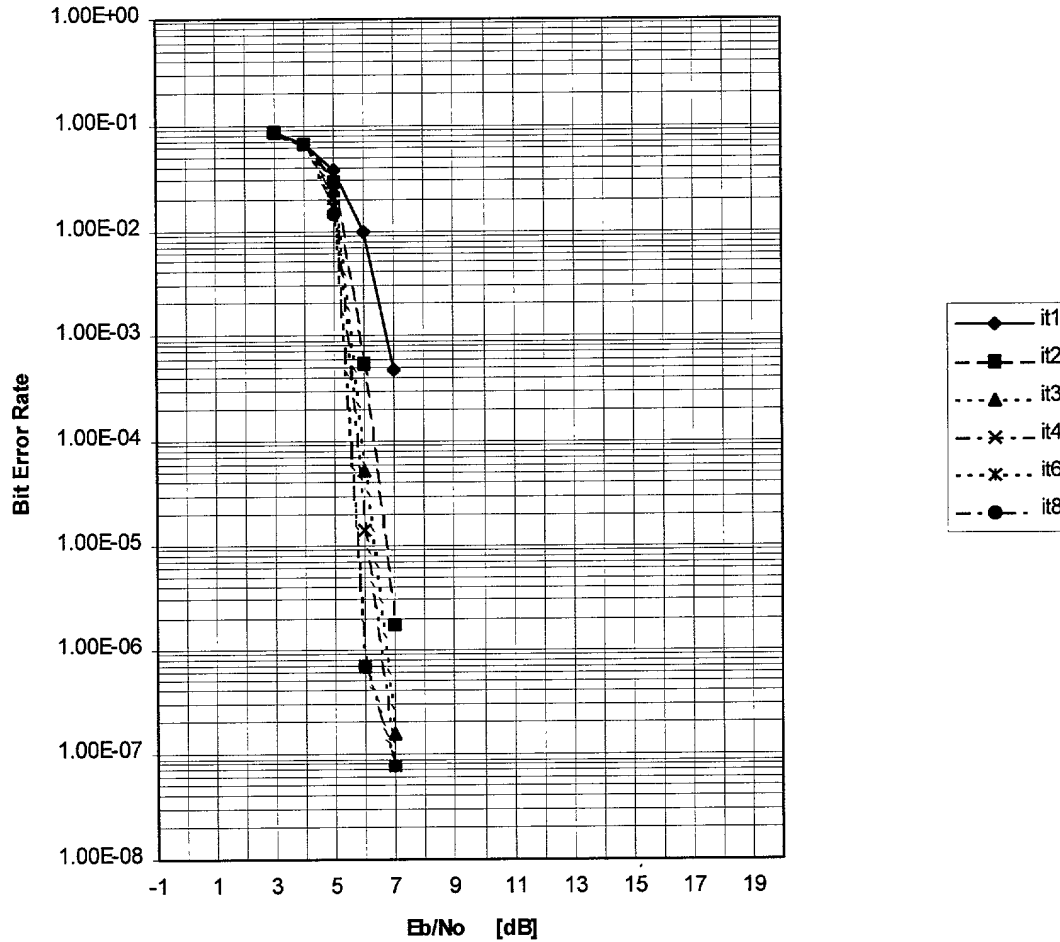


Figure 68

BER for Rate 4/6 64QAM N=2,100 bits AWGN Channel  
Analytical odd-even smile interleaver

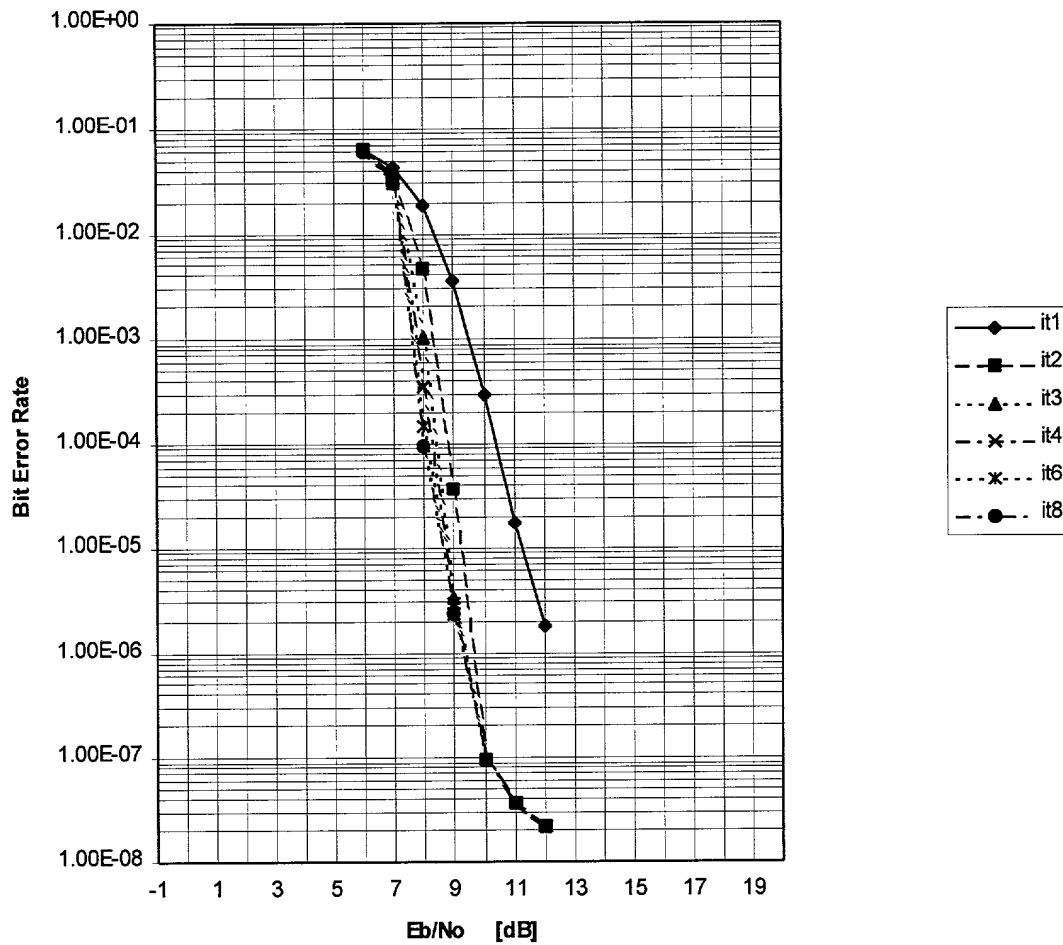


Figure 69



**BER for Rate 5/8 256QAM N=2,100 bits AWGN Channel**  
**Analytical odd-even smile interleaver**

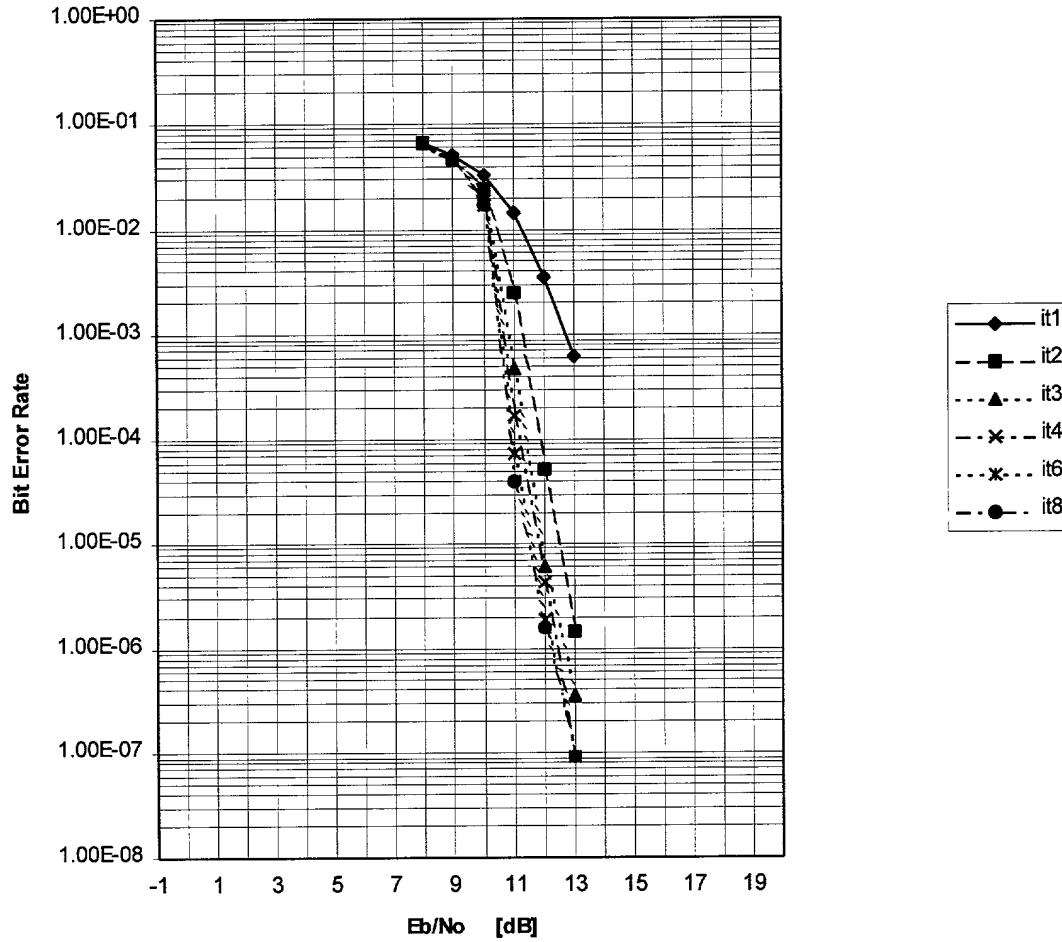


Figure 70

**BER for Rate 6/8 256QAM N=2,100 bits AWGN Channel**  
**Analytical odd-even smile interleaver**

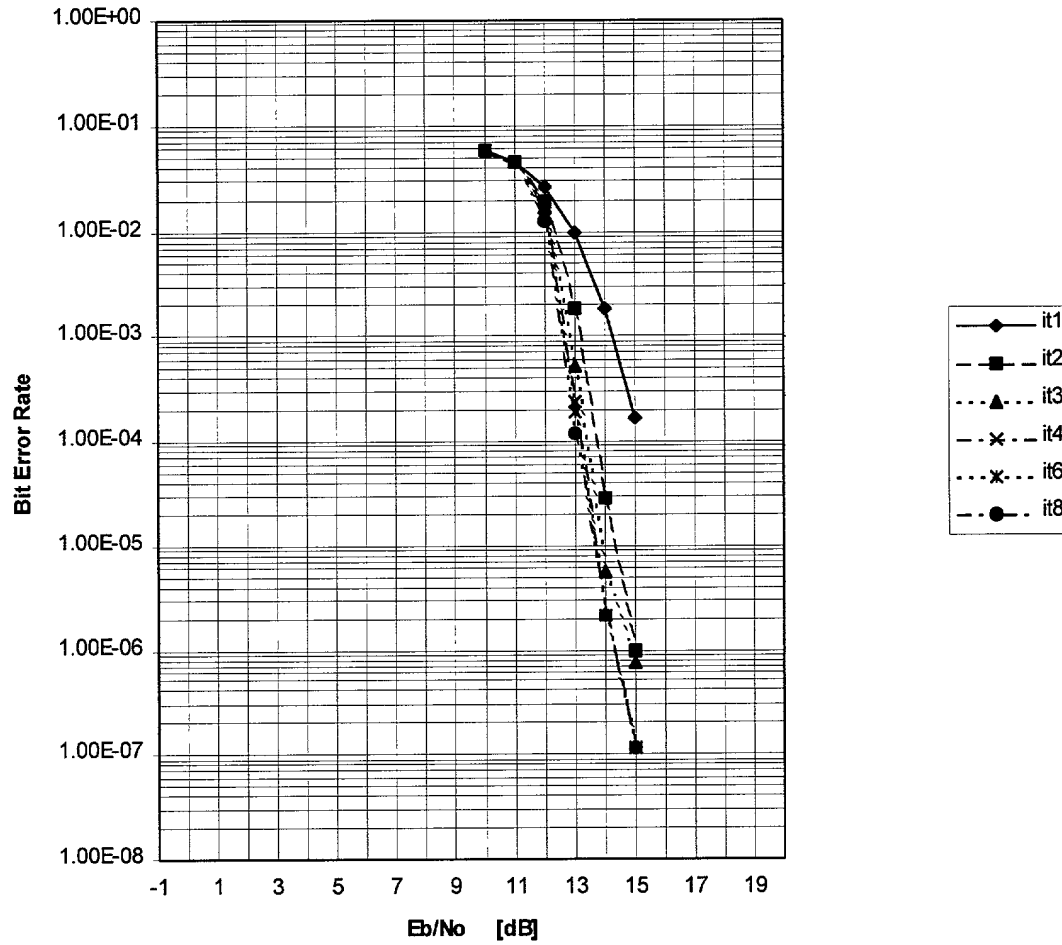


Figure 71

BER for Rate 7/10 1024QAM N=2,100 bits AWGN Channel  
Analytical odd-even smile interleaver

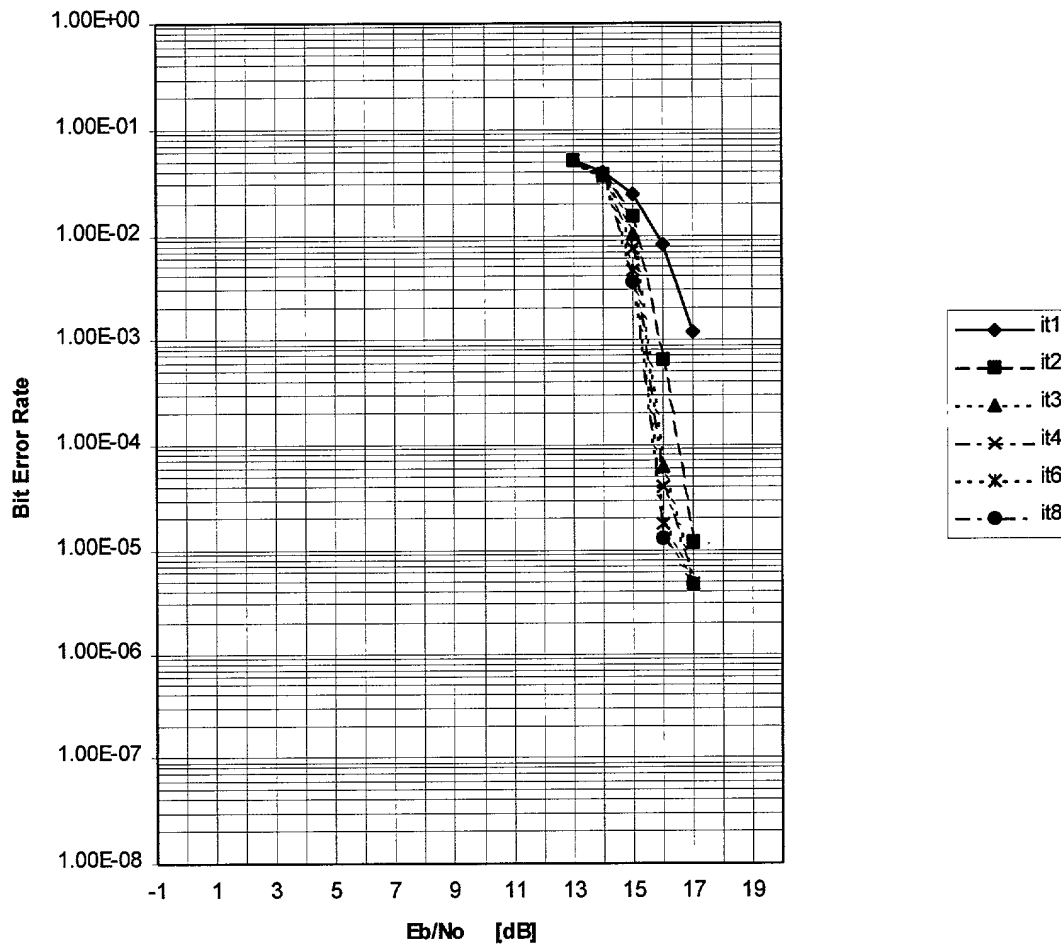


Figure 72

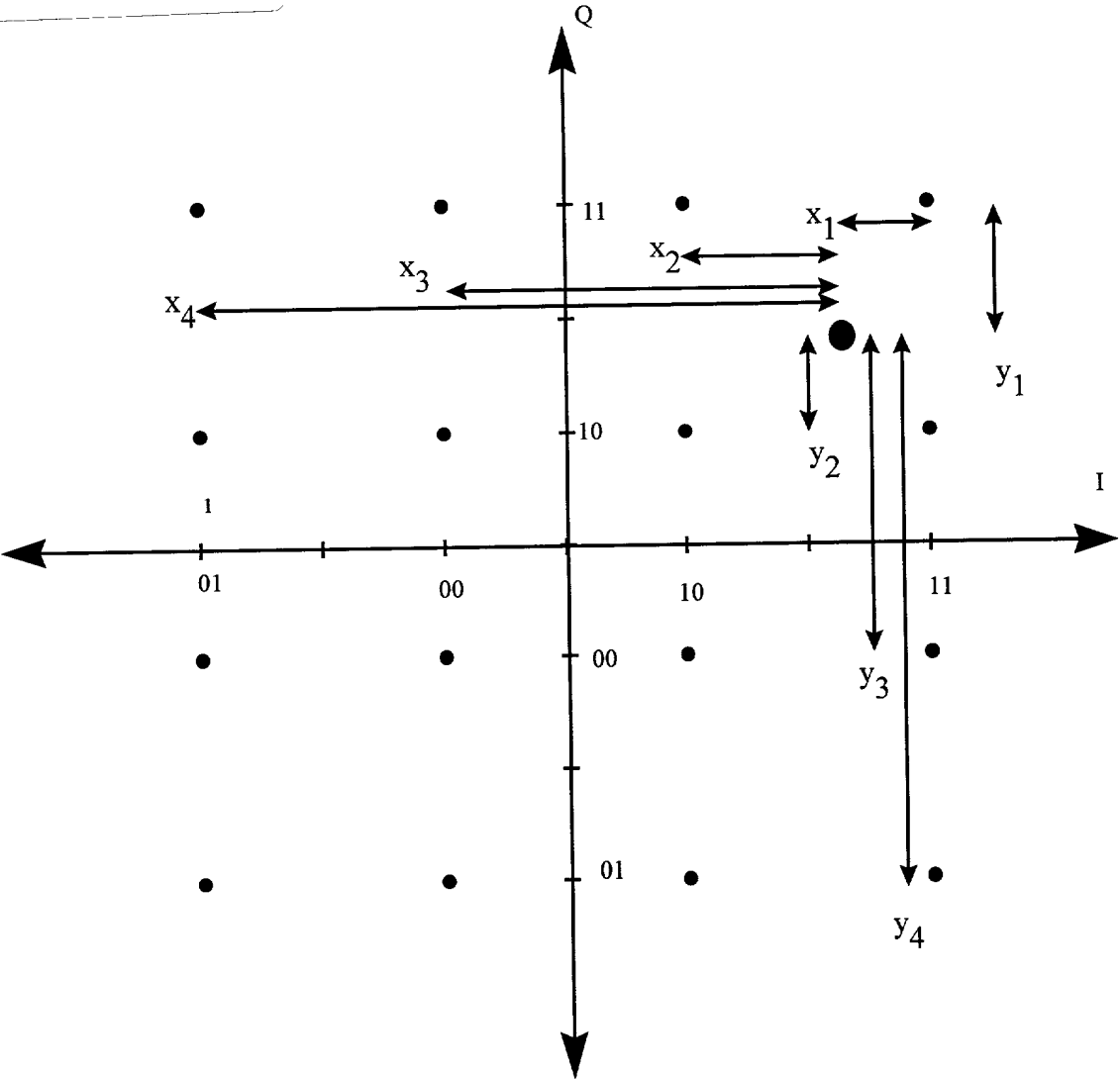


Figure 73

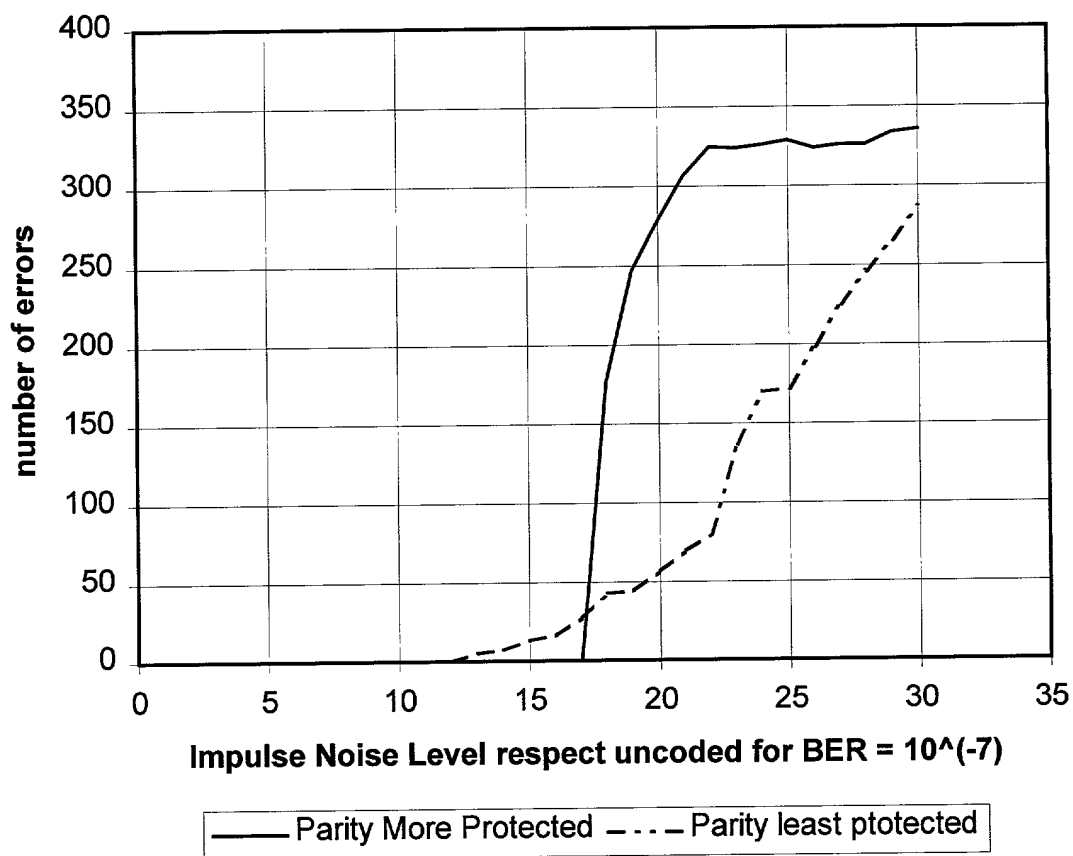


Figure 74

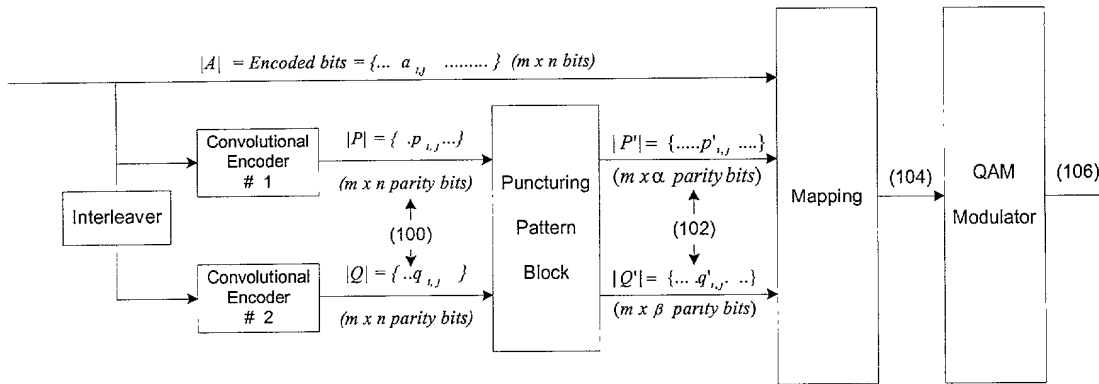


Figure 75

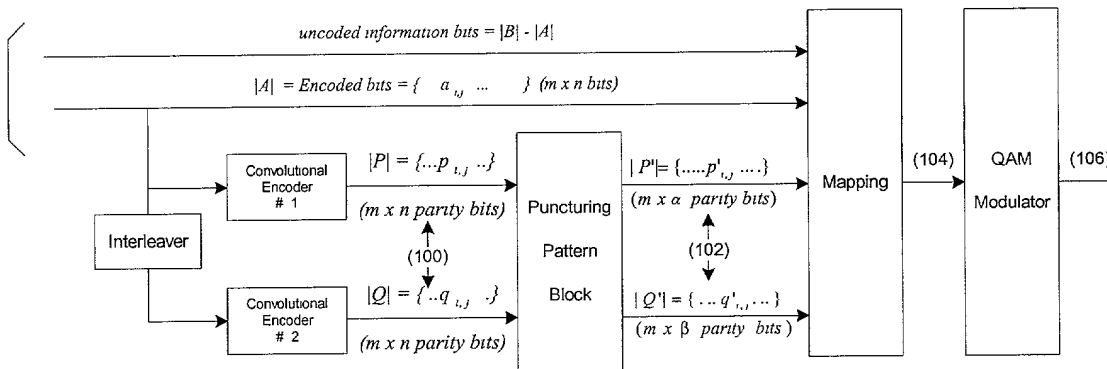


Figure 76

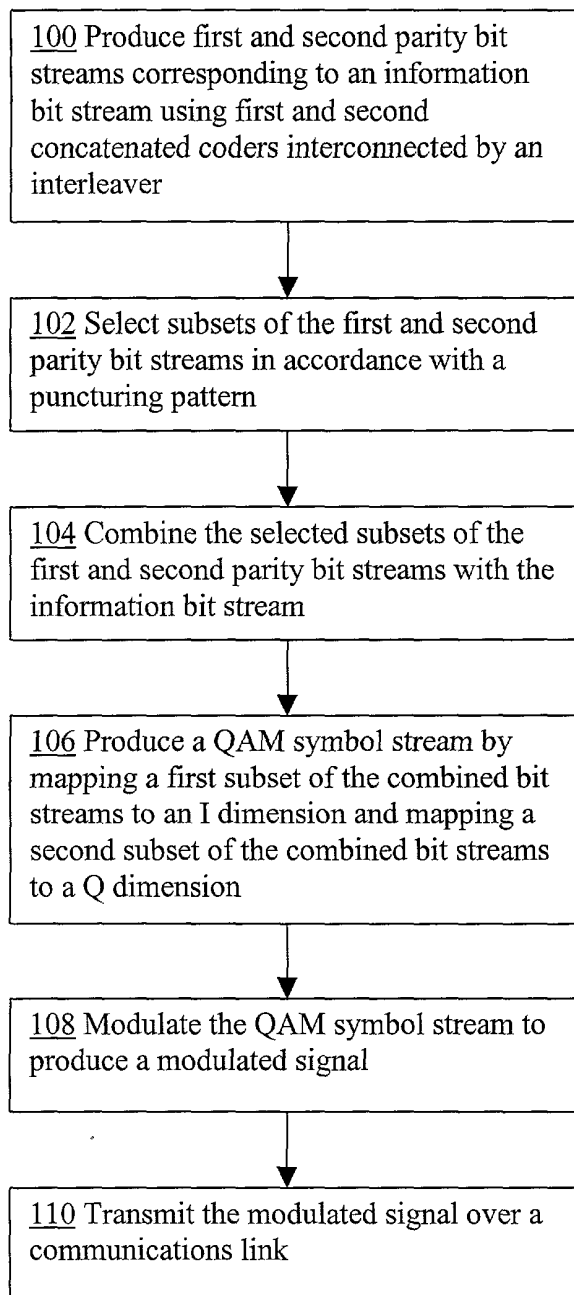


Figure 77

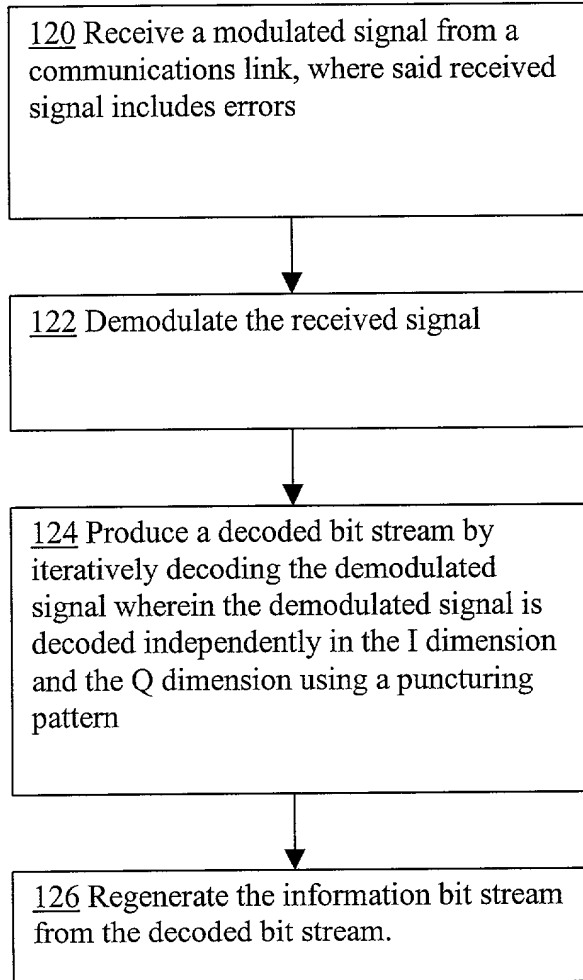


Figure 78



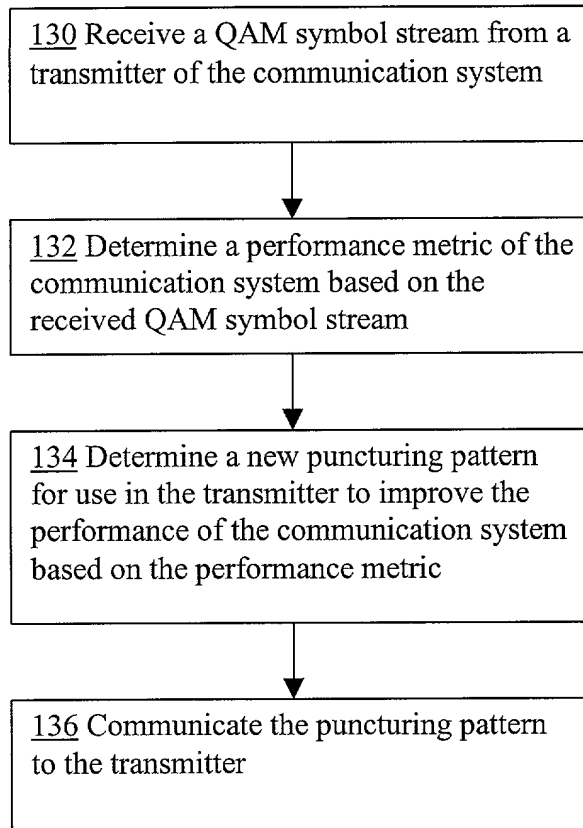


Figure 79